**FIG. 1**

System	Producing Lithology	Tectonics	Age (My)
Cretaceous (Austin Chalk)	Very fine-grained carbonate	Salt withdrawal, extensional	100
Devonian (New Albany Shale)	Siliciclastic, very fine-grained siliciclastics	Compression, faulting	360
Cretaceous (Mesaverde)	Fine-grained sandstones	Compression, thrusting	70
Silurian-Pennsylvanian (Anadarko Basin)	Variety	Deep subsidence and faulting	400-280
Ordovician (Permian Basin)	Vuggy and fractured carbonate (Ellenburger, etc.)	Uplift, wrenching	500

FIG. 2

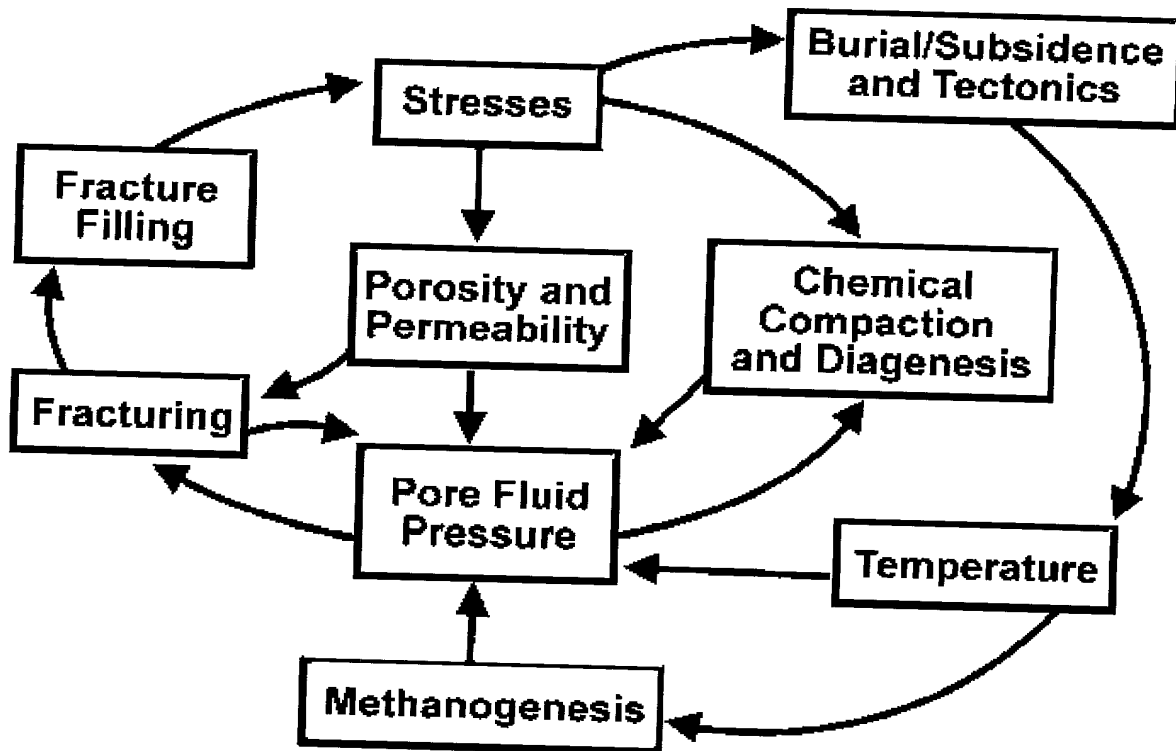


FIG. 3

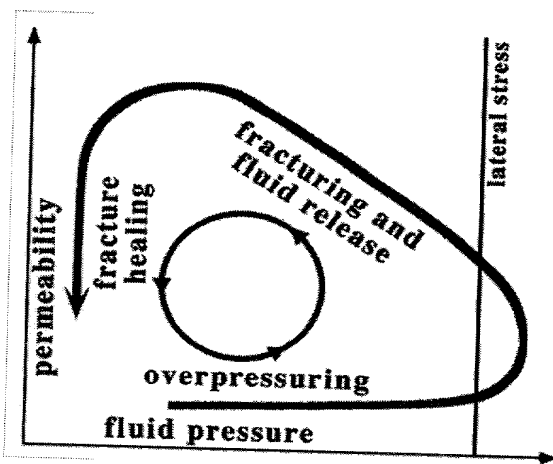


FIG. 4a

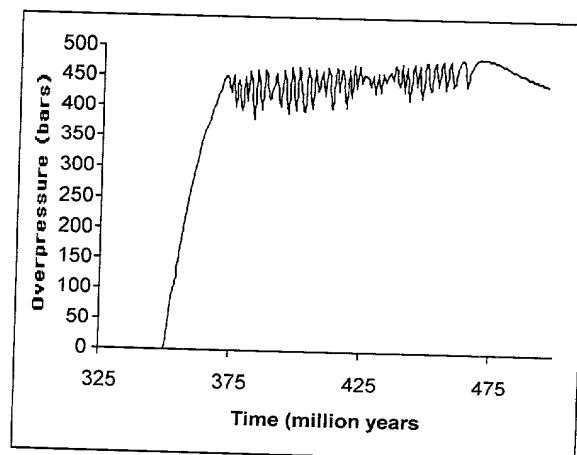


FIG. 4b

**permeability
(matrix +
fracture)**

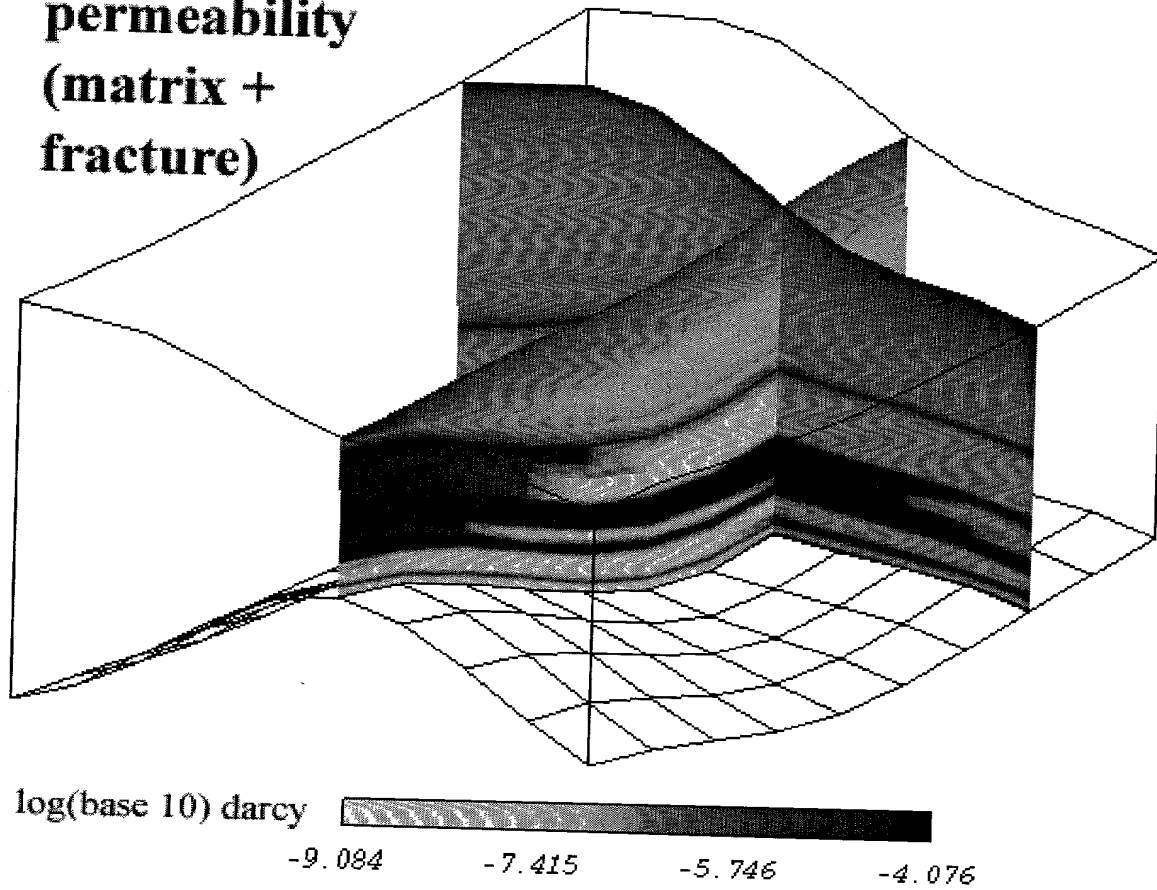


FIG. 5

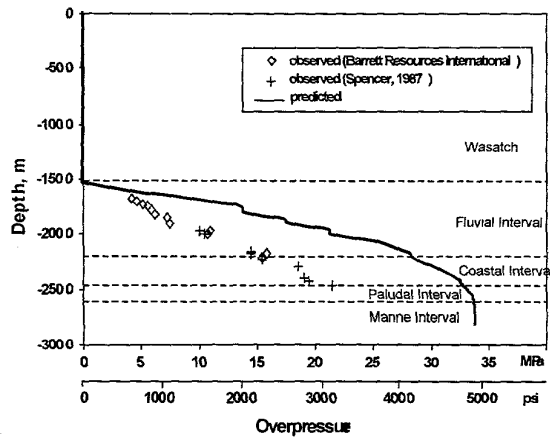


FIG. 6a

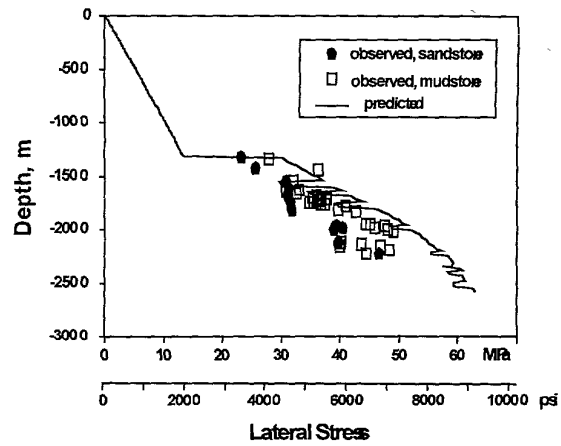


FIG. 6b

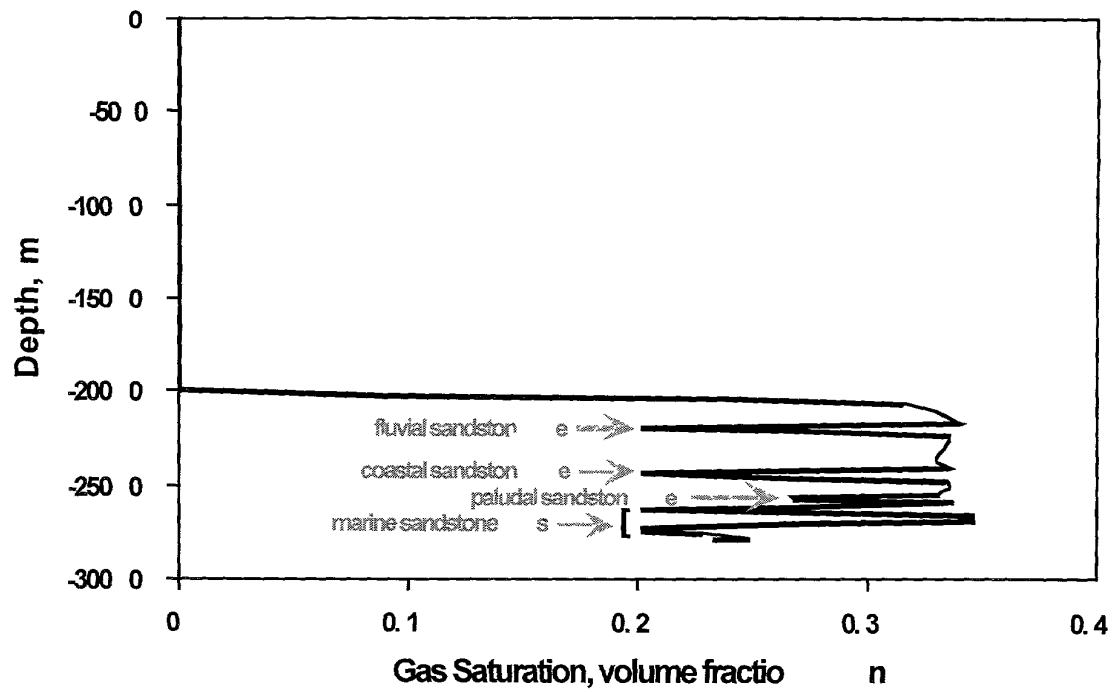


FIG. 6c

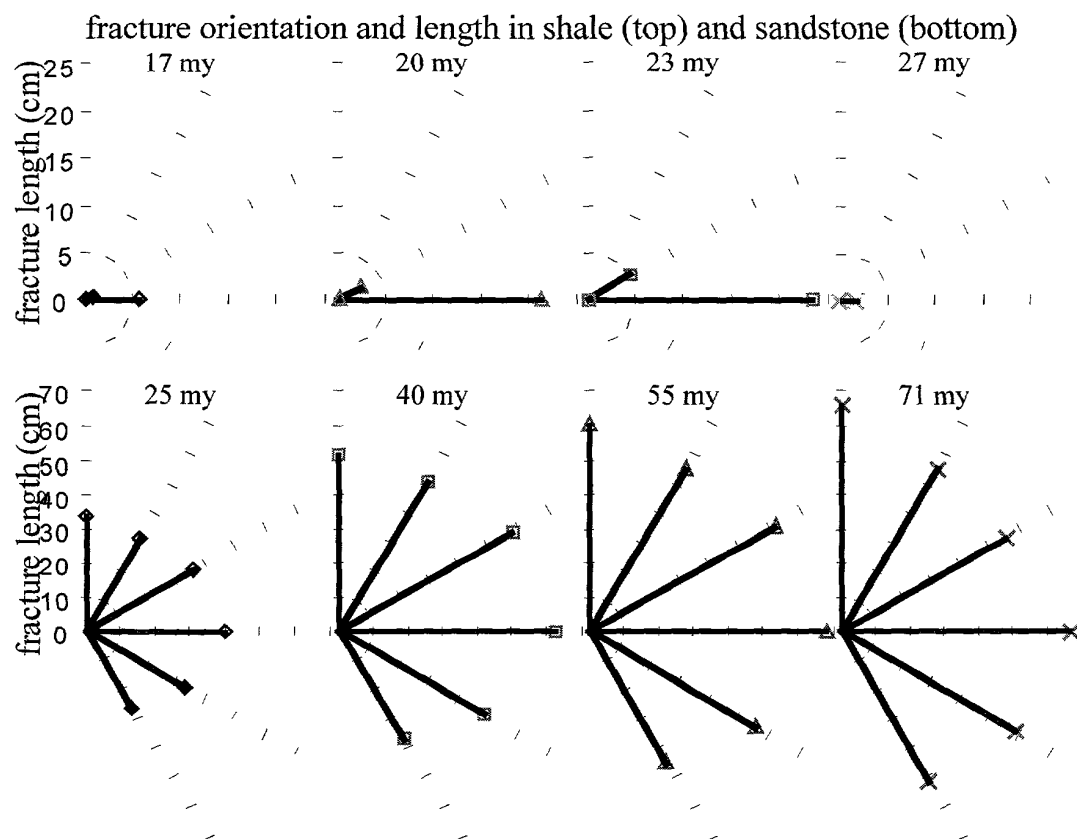


FIG. 7

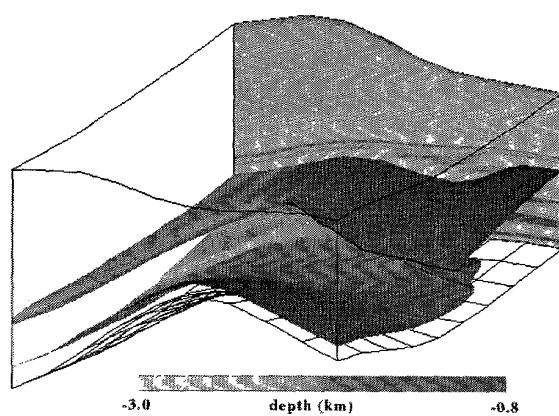


FIG. 8a

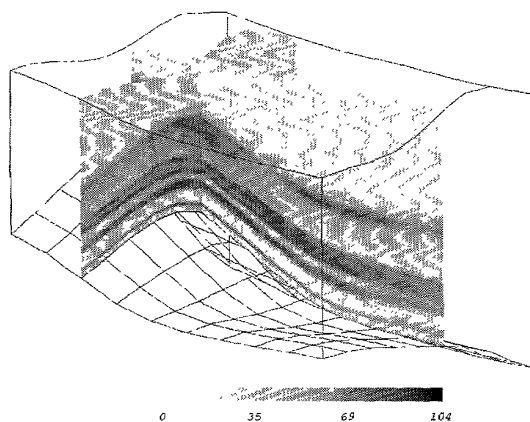


FIG. 8b

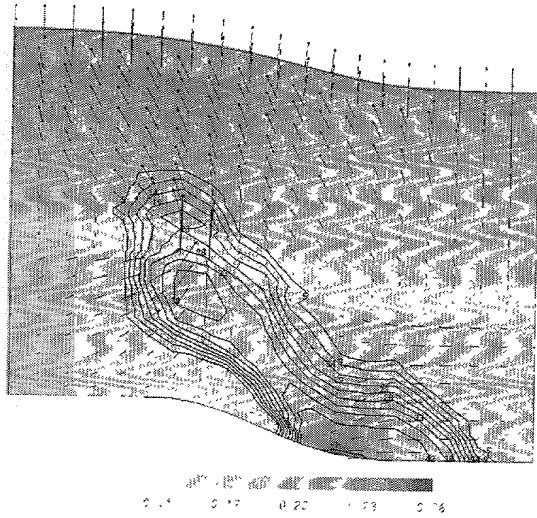


FIG. 9a

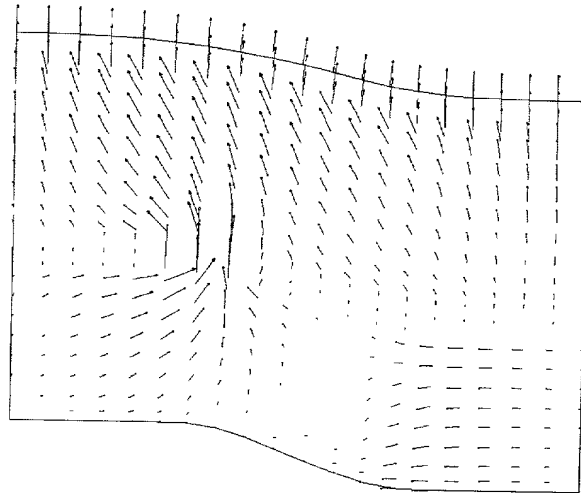


FIG. 9b

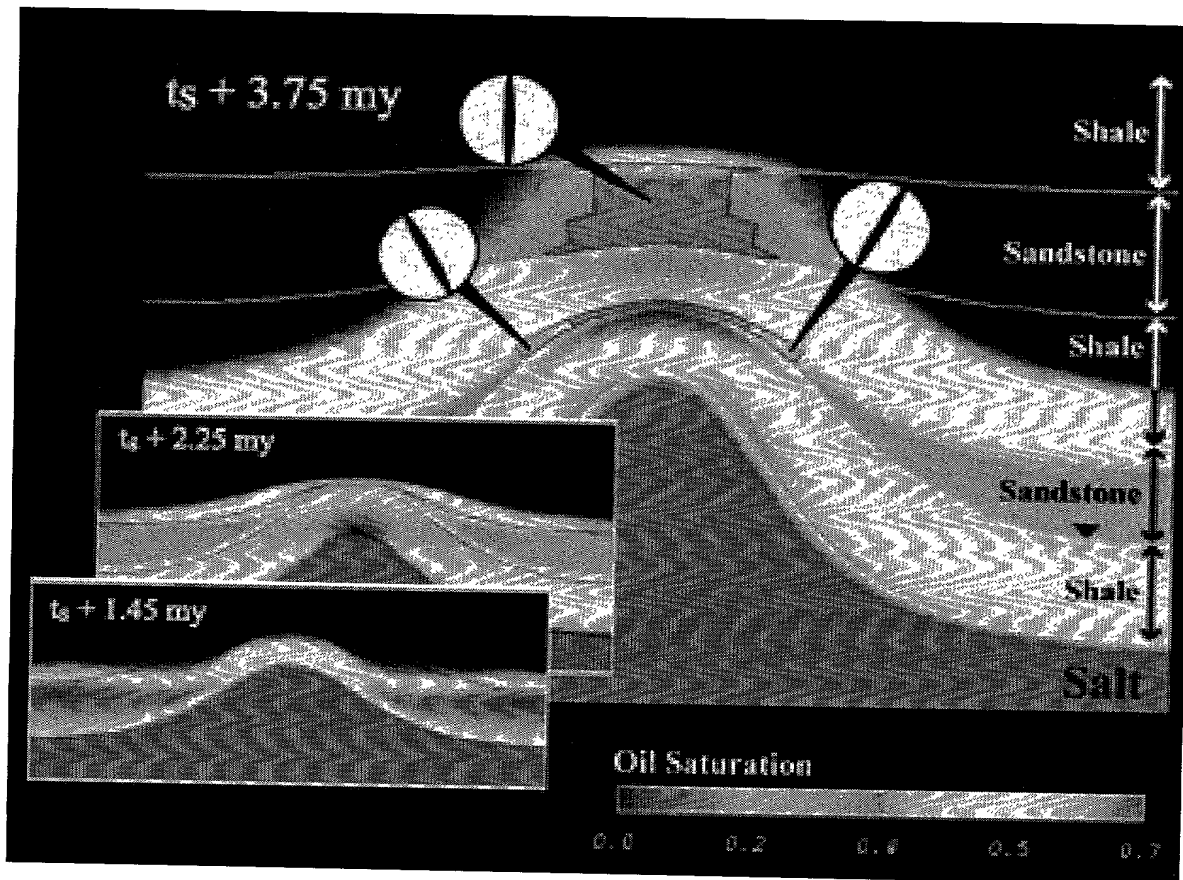


FIG. 10

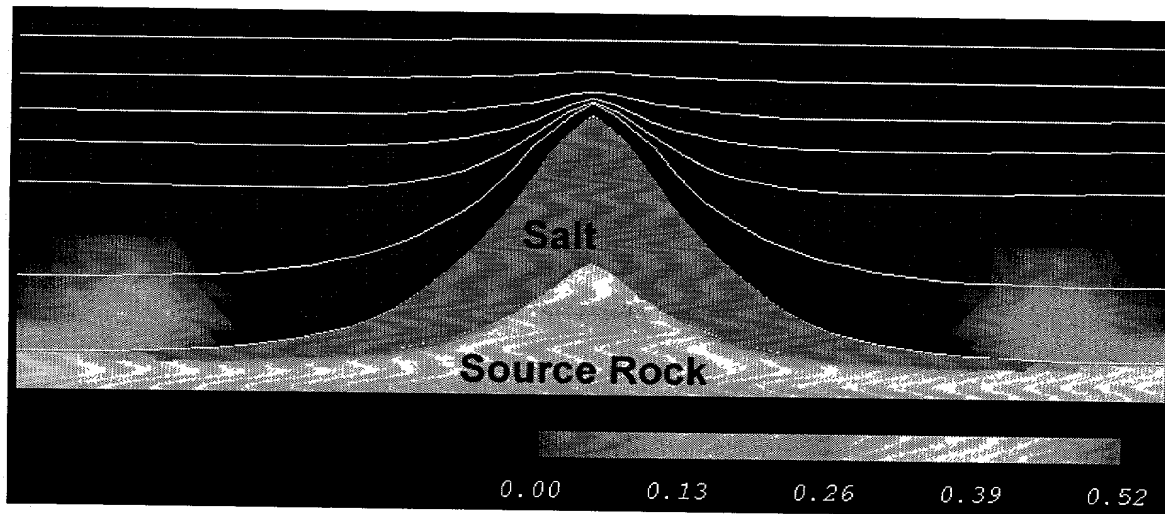


FIG. 11

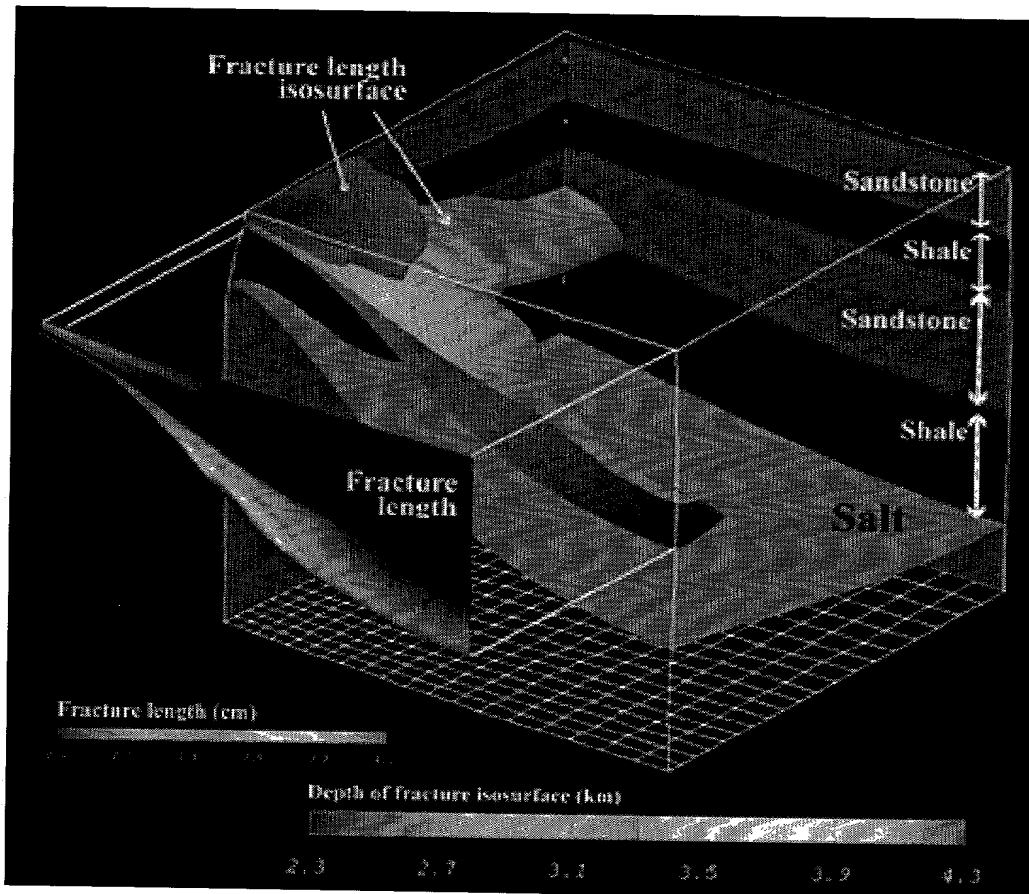


FIG. 12

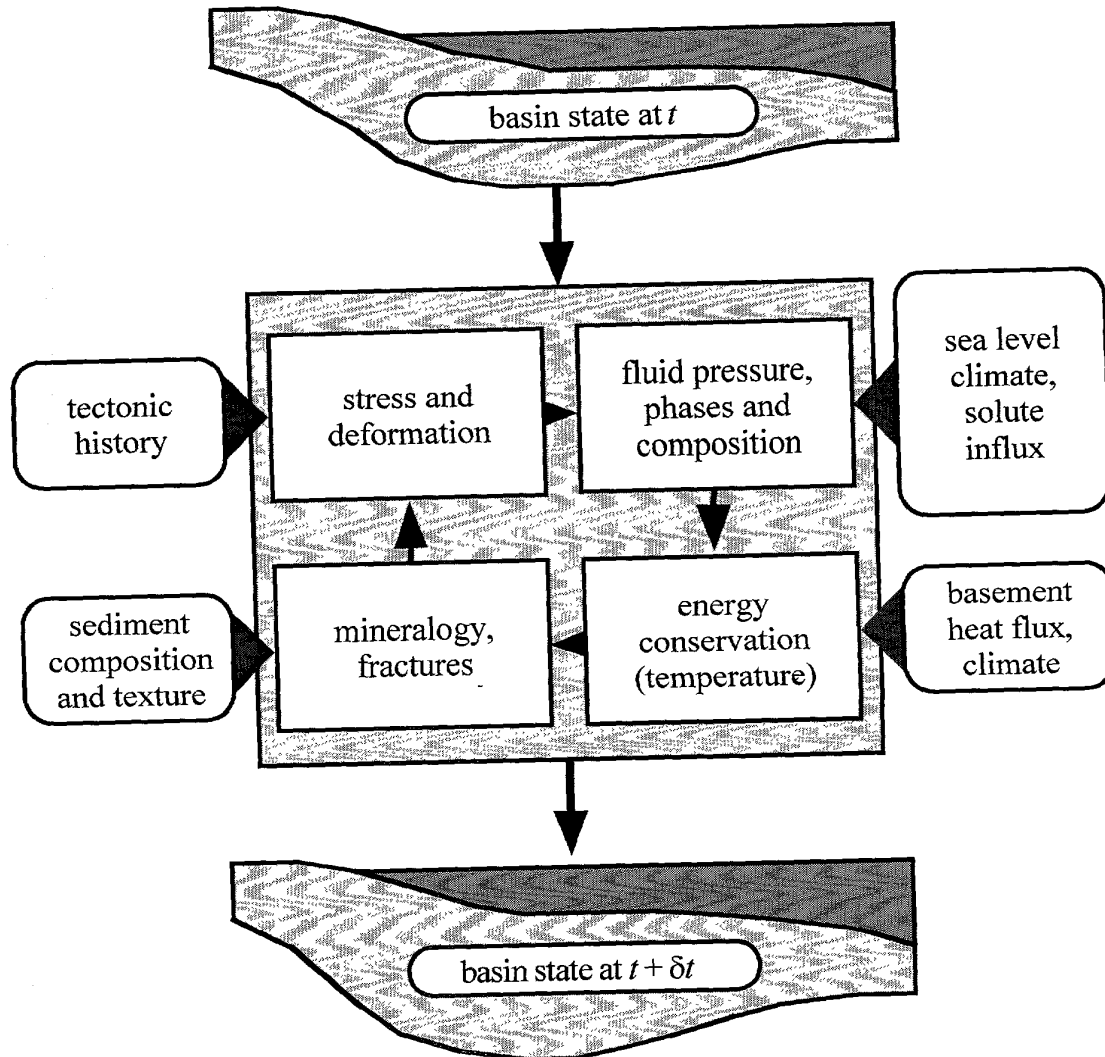
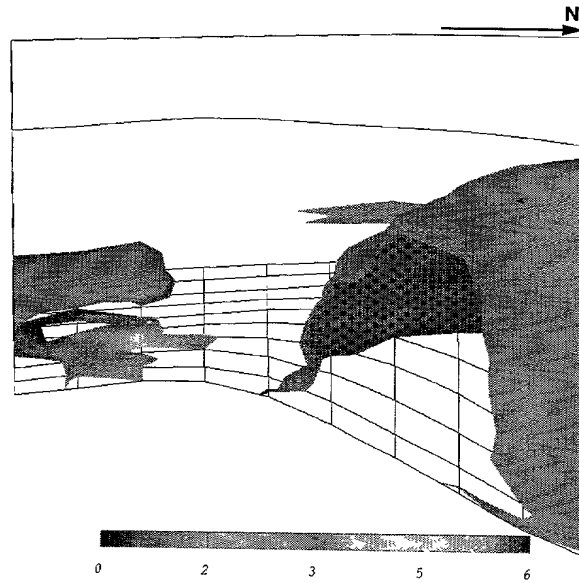


FIG. 13

**FIG. 14**

Type of Data
Petroleum reserve assessment
Fracture analysis
Well log and seismic data
Tectonic and stress history
Thermal data and analysis
Stratigraphy
Data on organic content and thermal maturity
Fluid composition, pressure, and transport
Hydrothermal and magmatic fluids

FIG. 15

Total Permeability vs. Depth

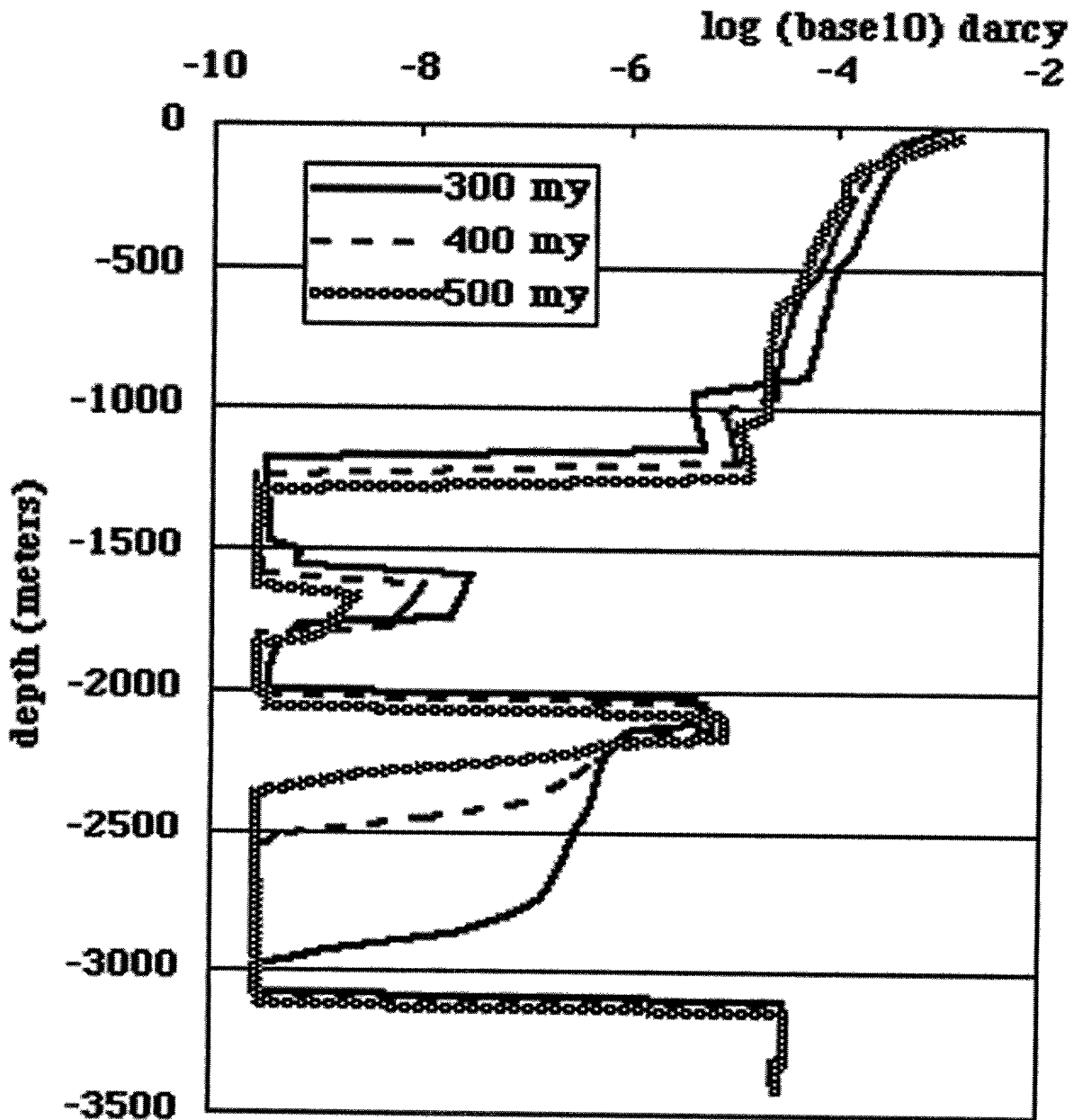


FIG. 16

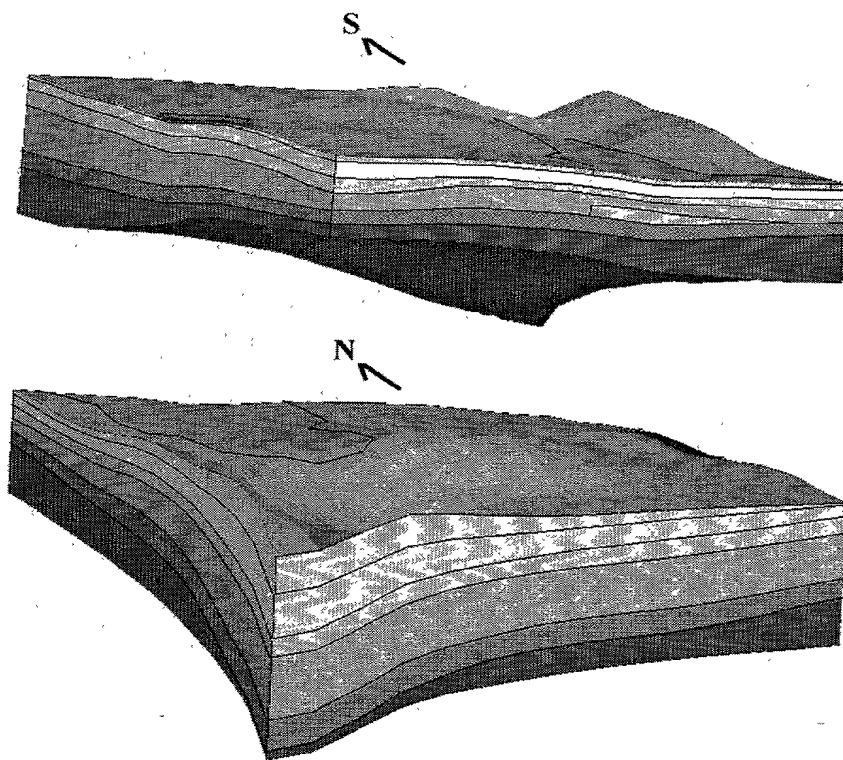


FIG. 17

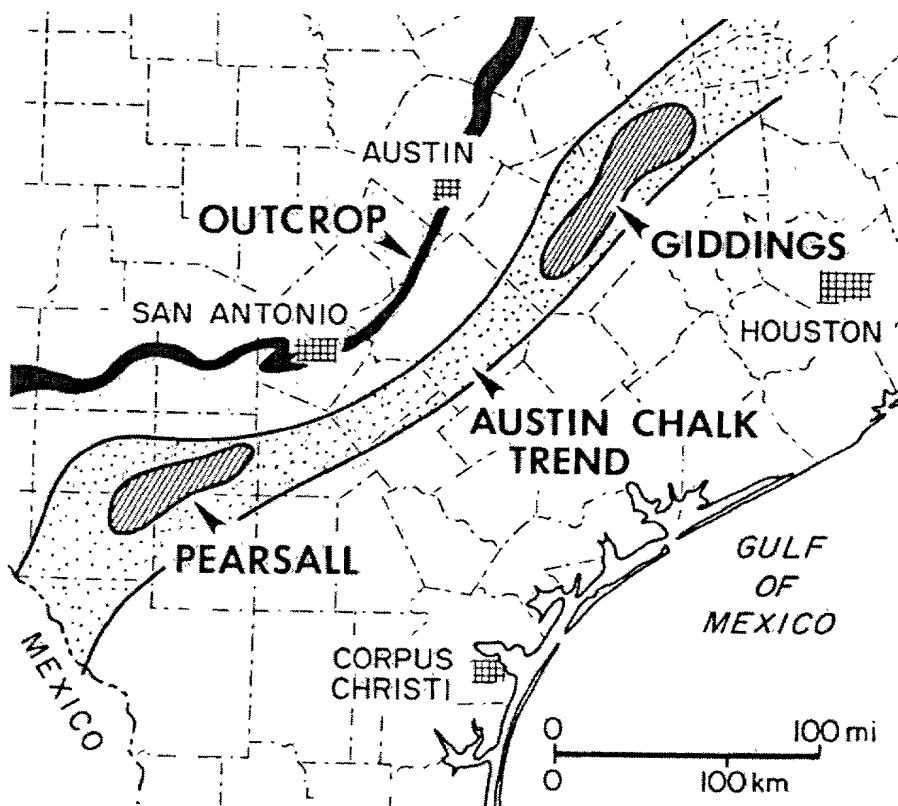


FIG. 18

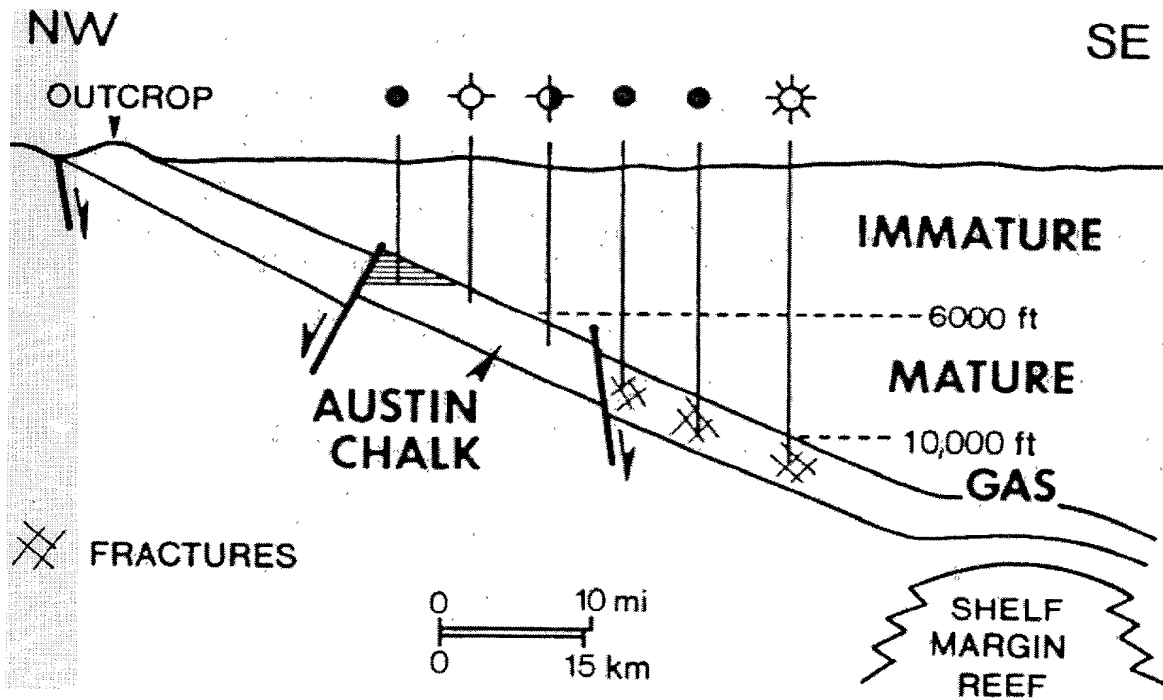


FIG. 19

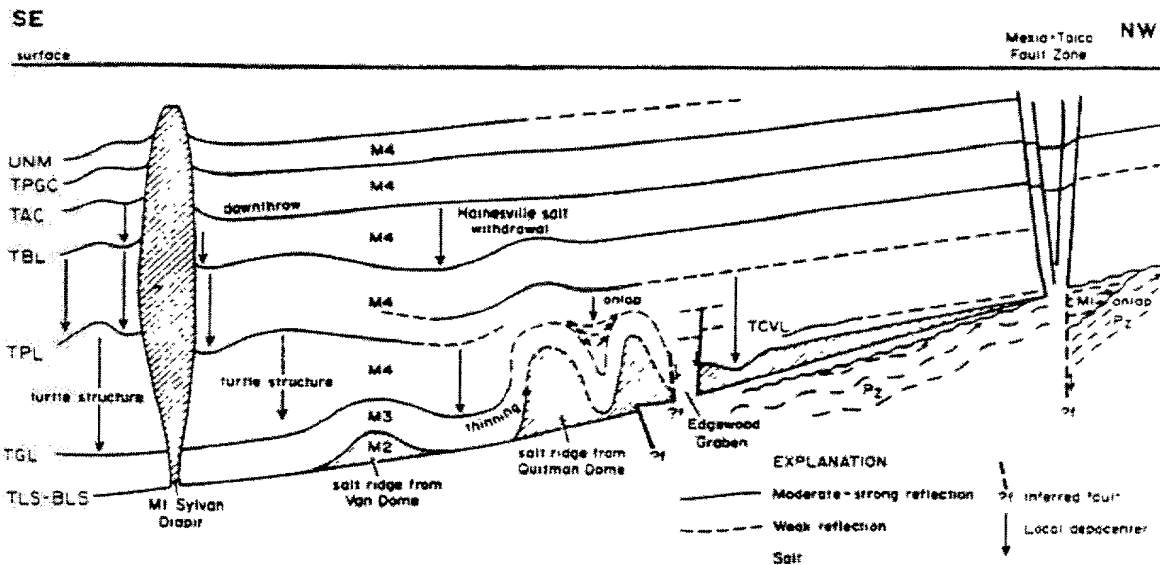
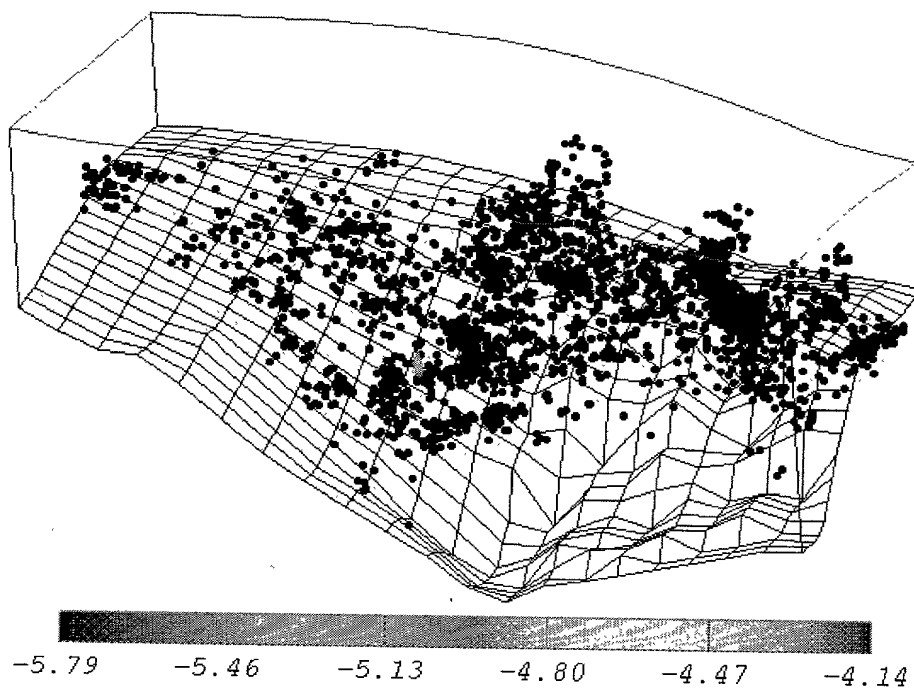
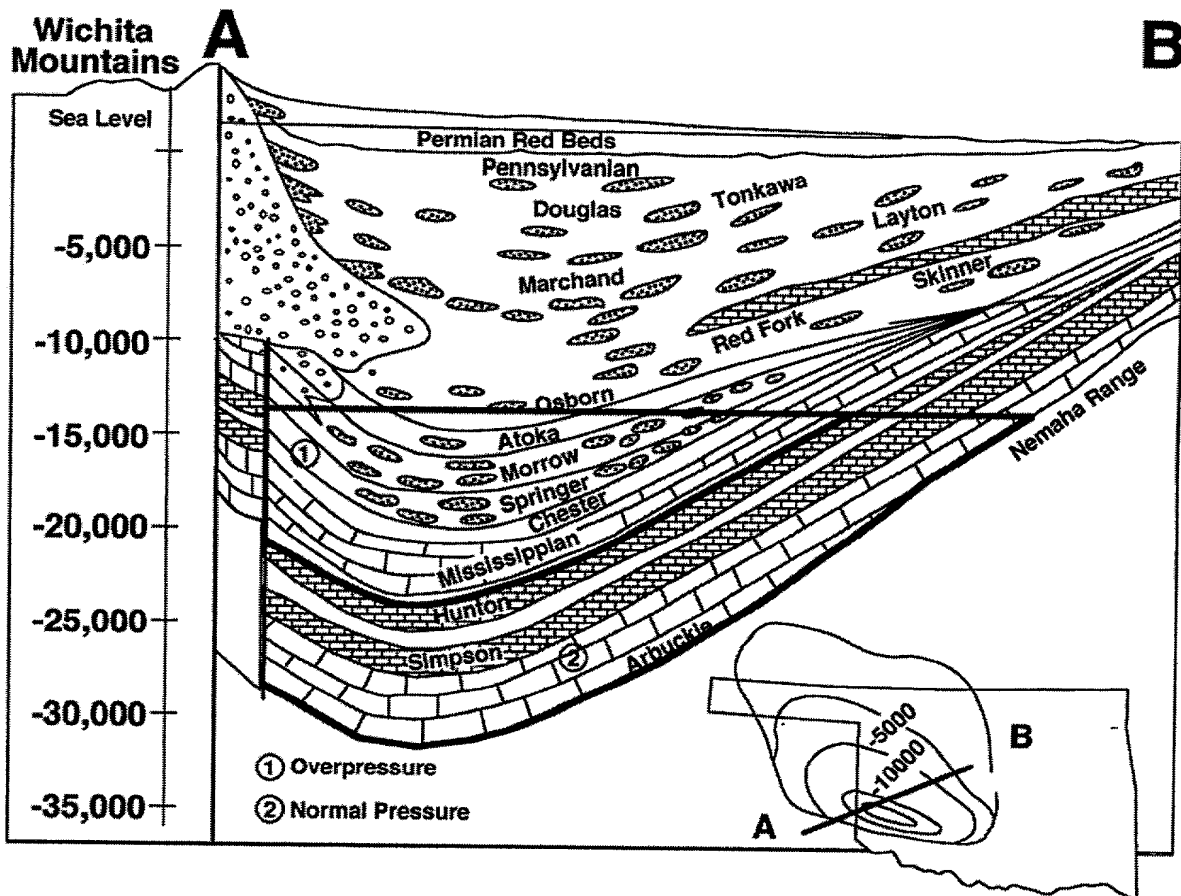


FIG. 20



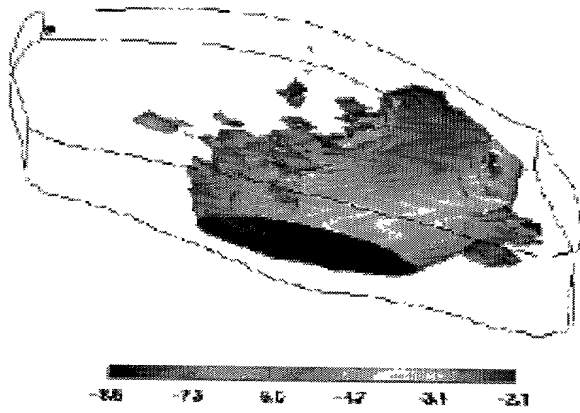


FIG. 21c

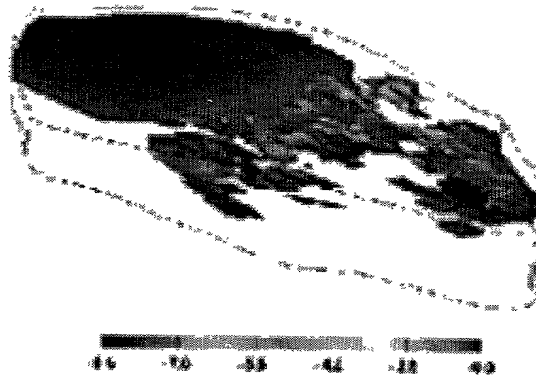


FIG. 21d

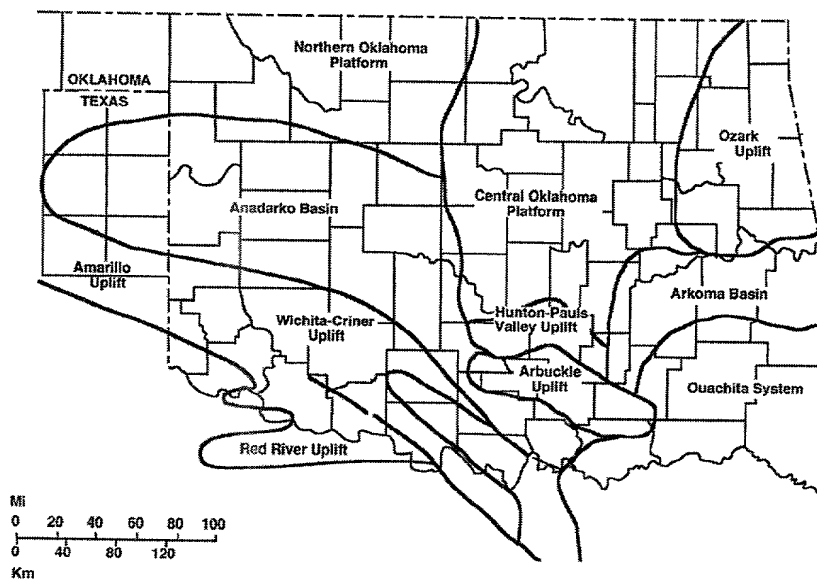


FIG. 22

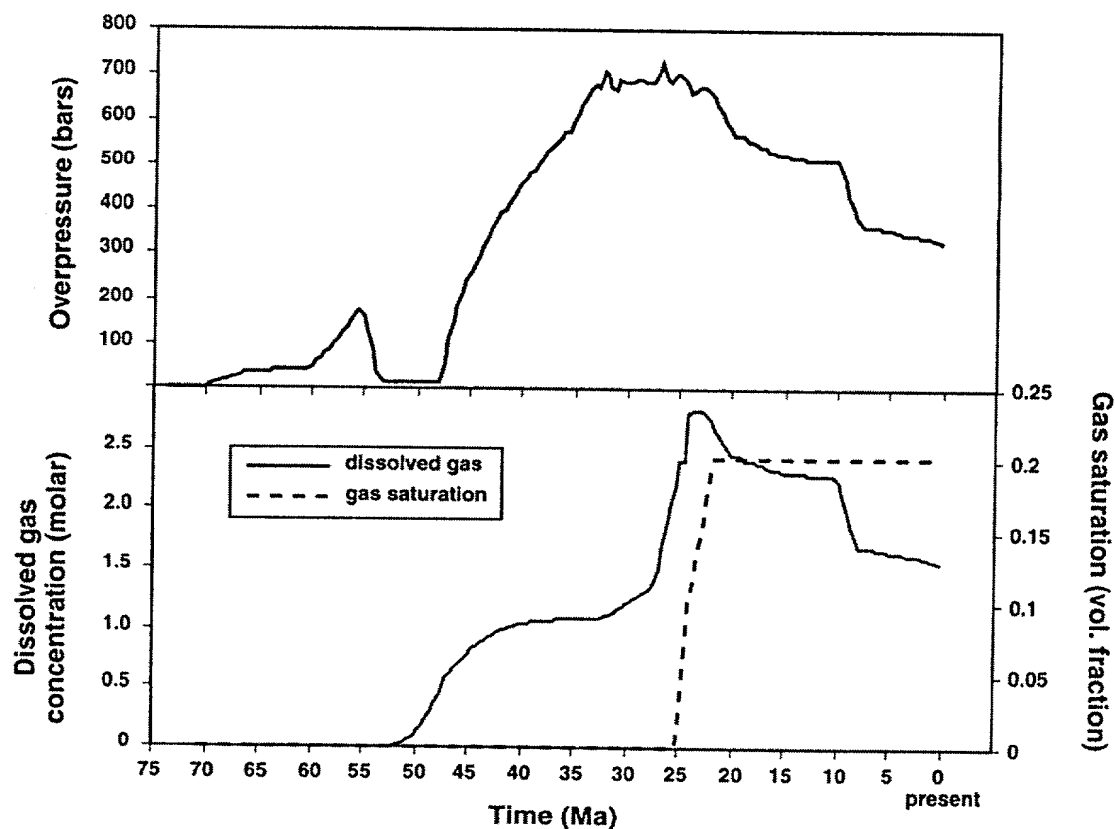


FIG. 23

Type of Log	Formulas	Experiments
Sonic	Bourbie et al. 1987; Tittman 1986	Bourbie et al. 1987
Density	Tittman 1986	Ahmadi and Coe 1997
Gamma	Tittman 1986	Ahmadi and Coe 1997
Resistivity	Revil et al. 1997; Tittman 1986	Penicol and Jing 1997; Donaldson et al. 1991
Permeability	Bastos et al. 1998; Tittman, 1986	Bastos et al. 1998
Neutron	Revil et al. 1997; Tittman 1986	
SP	Revil et al. 1997; Tittman 1986	

FIG. 24

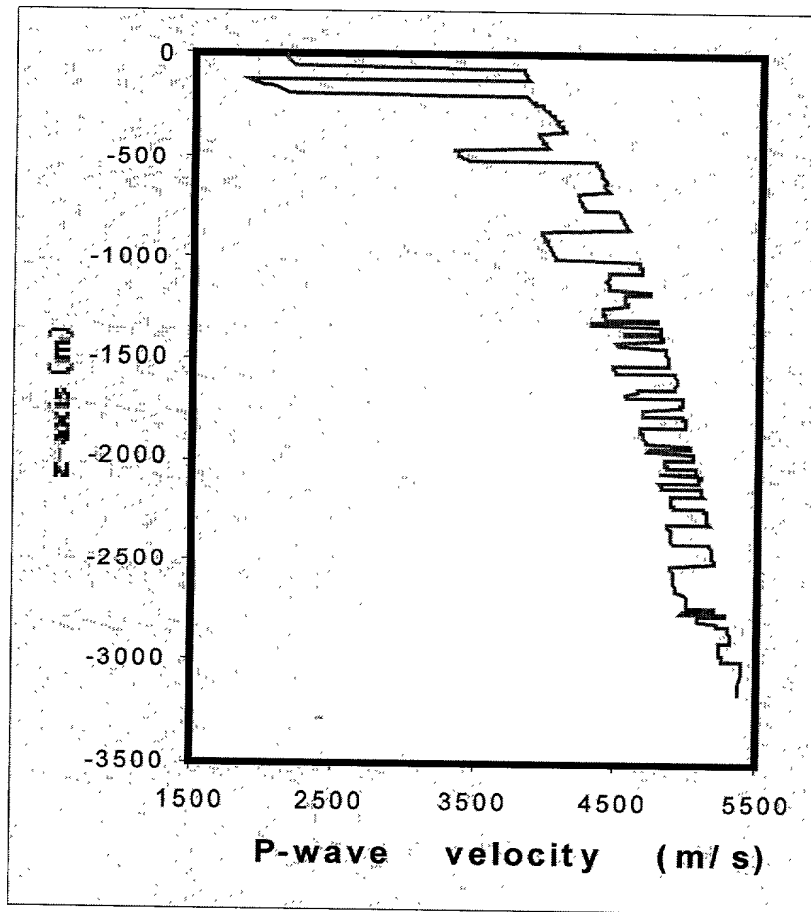


FIG. 25a

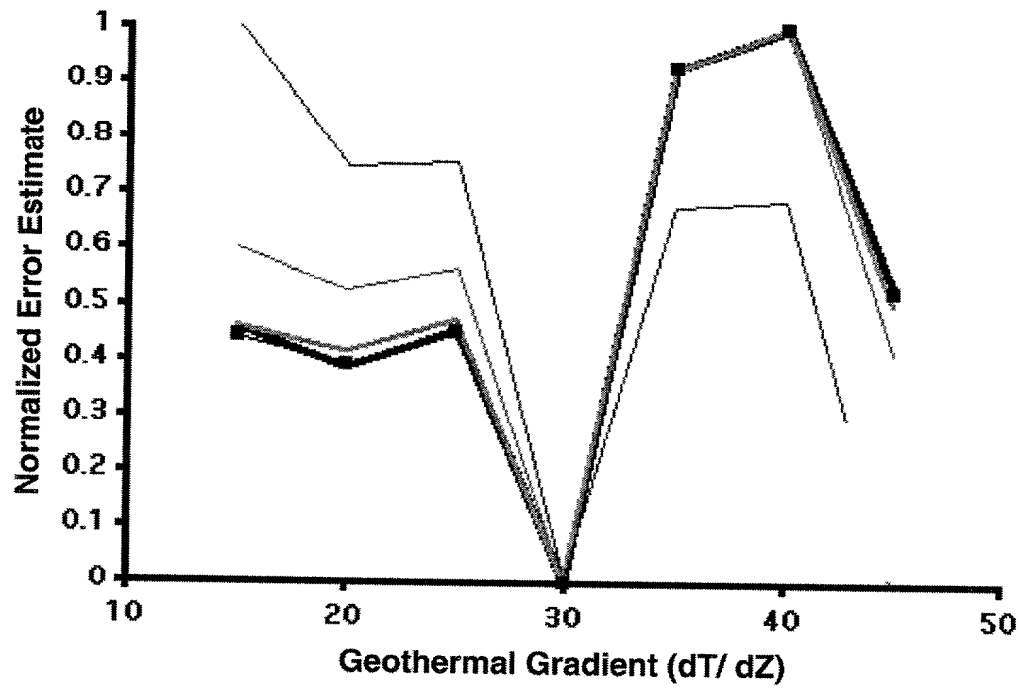


FIG. 25b

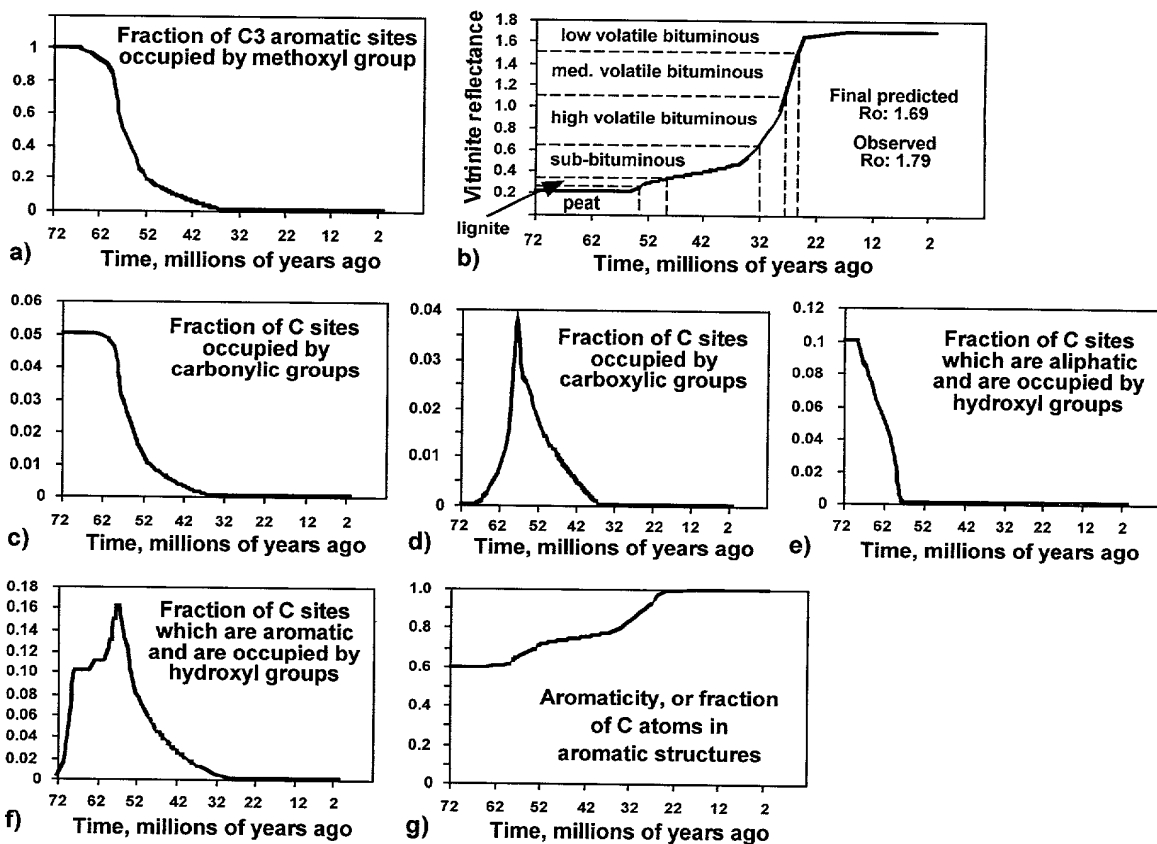


FIG. 26

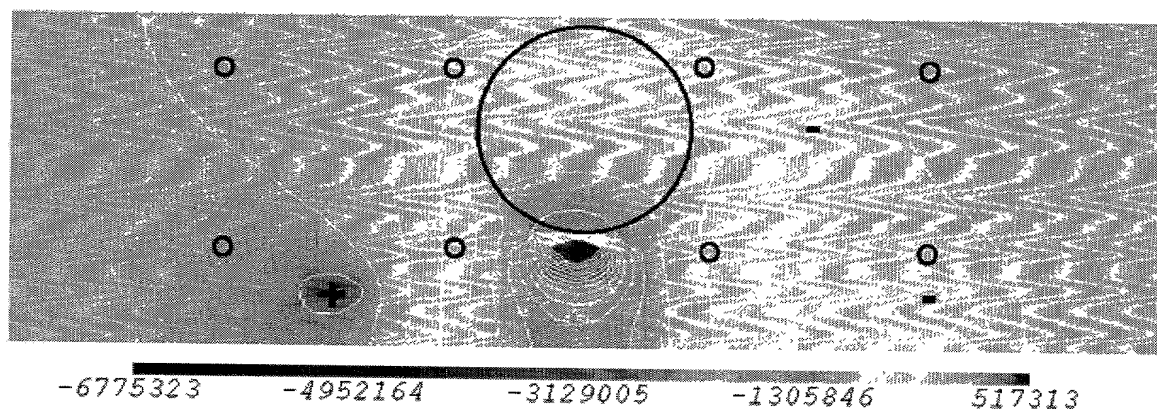
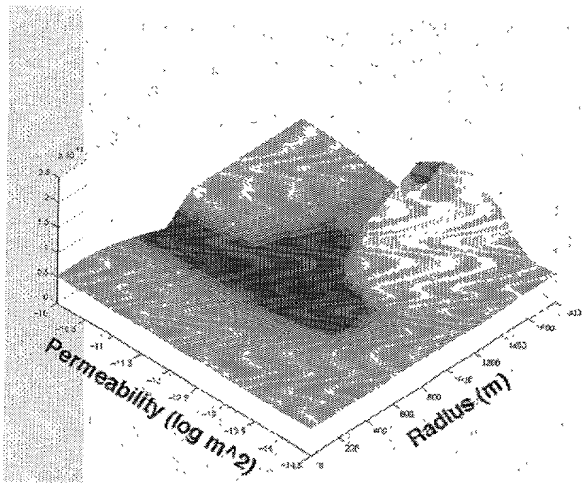
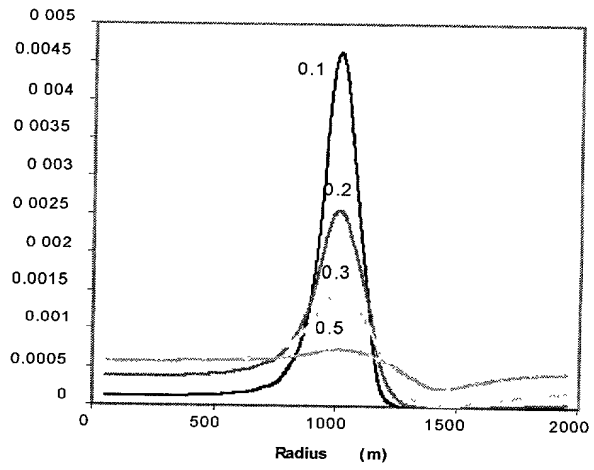
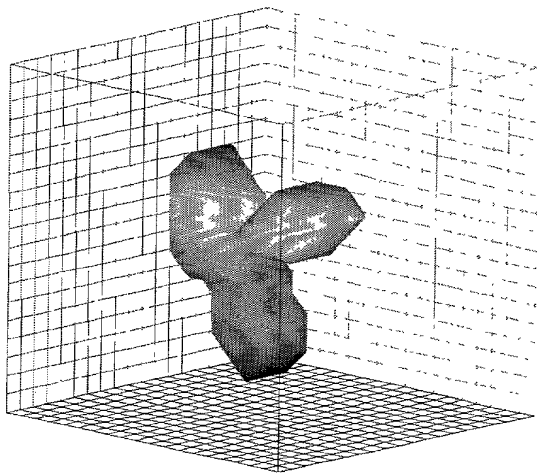
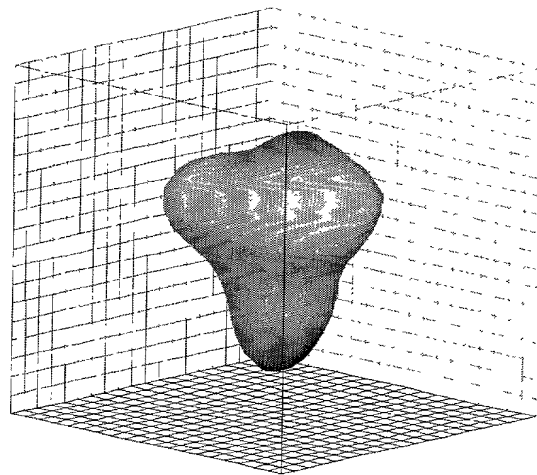


FIG. 27a

**FIG. 27b****FIG. 27c****(a)****(b)****FIGS. 28a and 28b**

Stratigraphic Interval	Cores	Thin Sections
1. Missourian-Virgilian	20	122
2. Desmoinesian	46	502
3. Morrowan	51	655
4. Springerian	8	79
5. Hunton		
6. Woodford	7	57
7. Simpson		
8. Arbuckle		
Total	166	2096

FIG. 29a

Data Type	# of Analysis
Wire-Line Logs	3,000
Pressure Data	5,000
Capillary Pressure	15
Vitrinite Reflectance	72
Isotopic Analysis	52
Fluid Inclusion	267
Seismic Lines	2
Tectonic History (Time Depth Profiles)	12
Permeability	35
Fracture Analysis	166

FIG. 29b

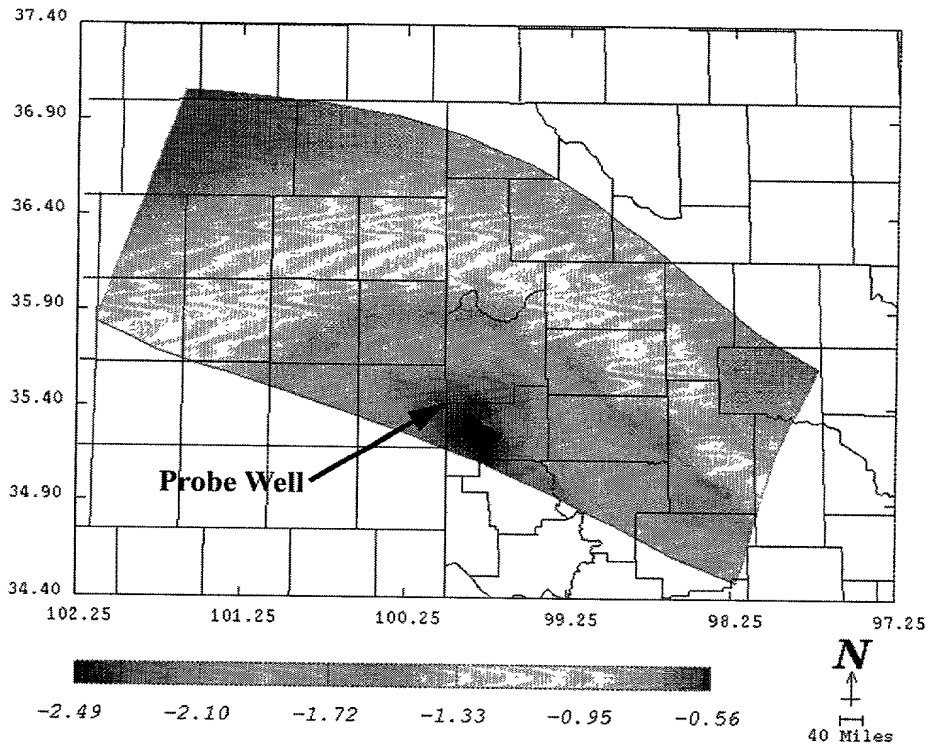


FIG. 30

Section 36 Crosswell Data - Velocity Change Due To CO₂, VGWU #94 to VGWU #81

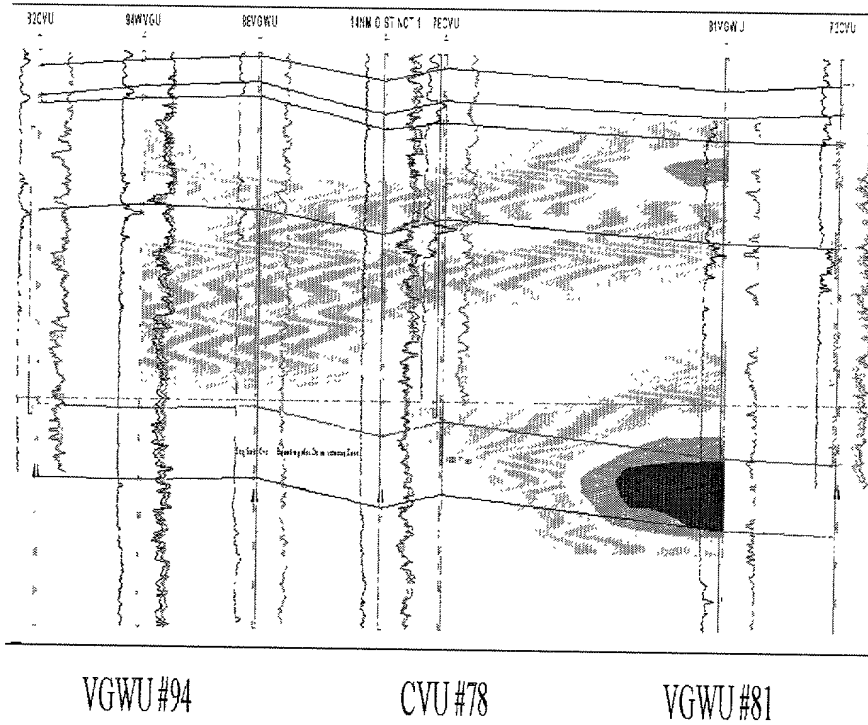
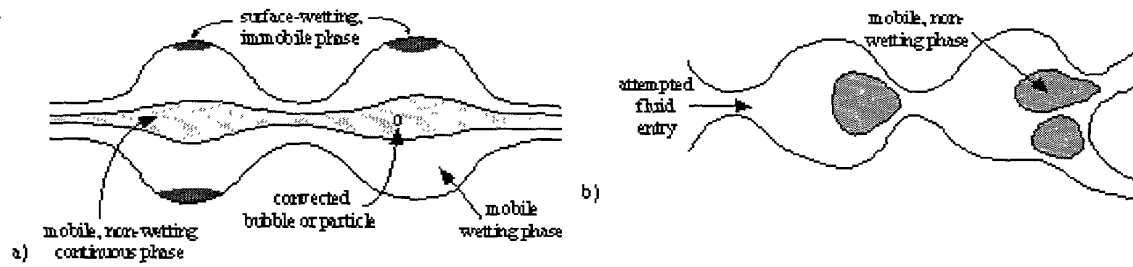


FIG. 31



FIGS. 32a and 32b

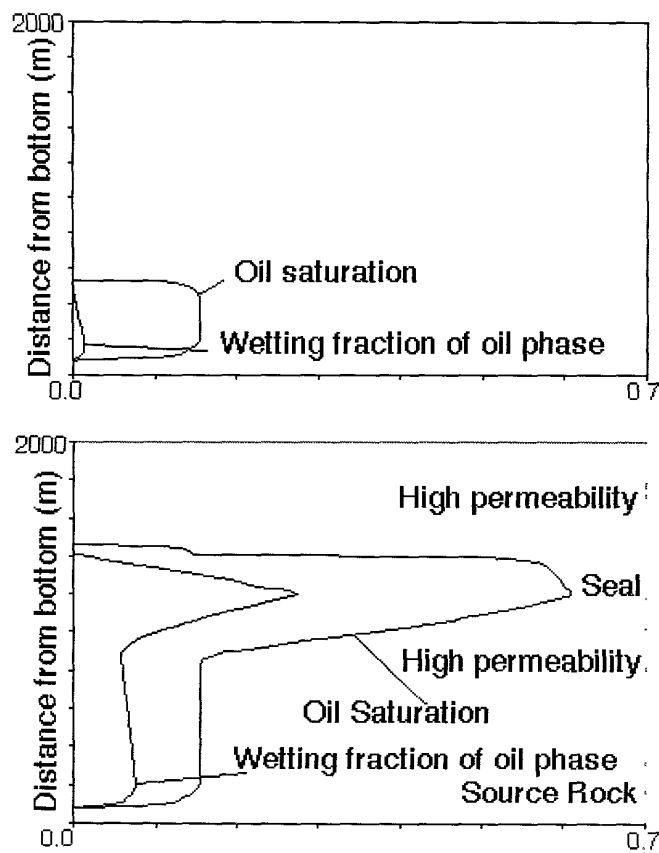


FIG. 33

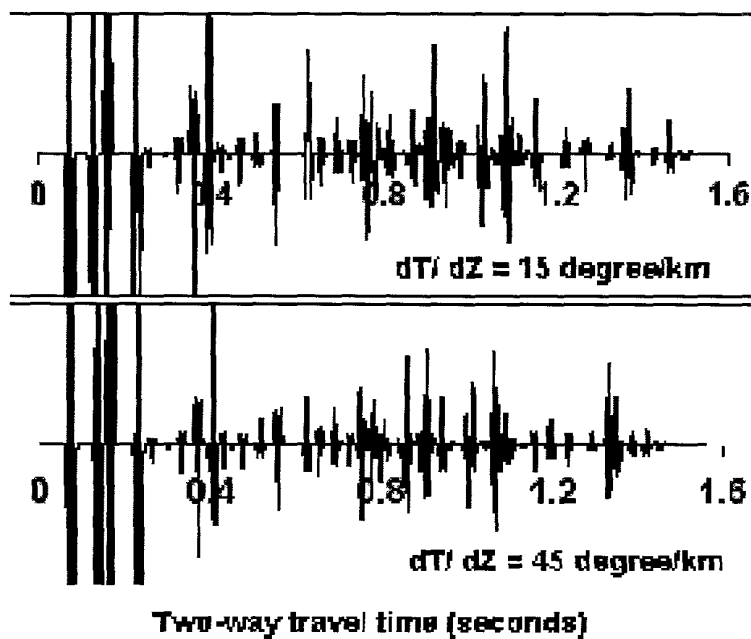


FIG. 34

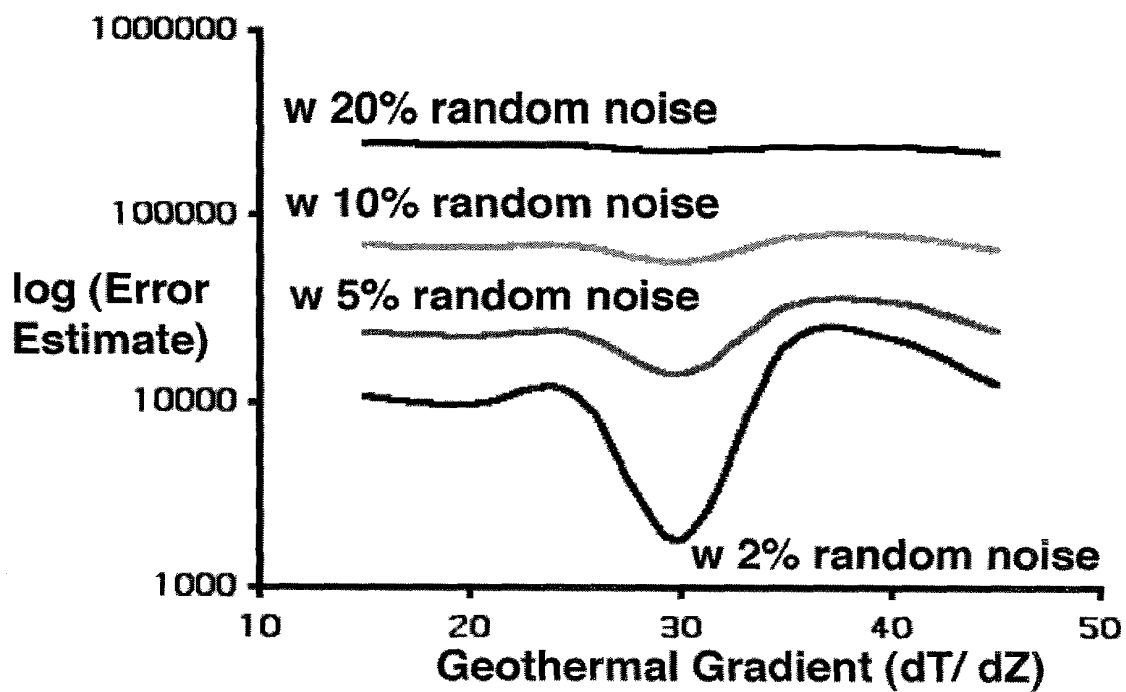
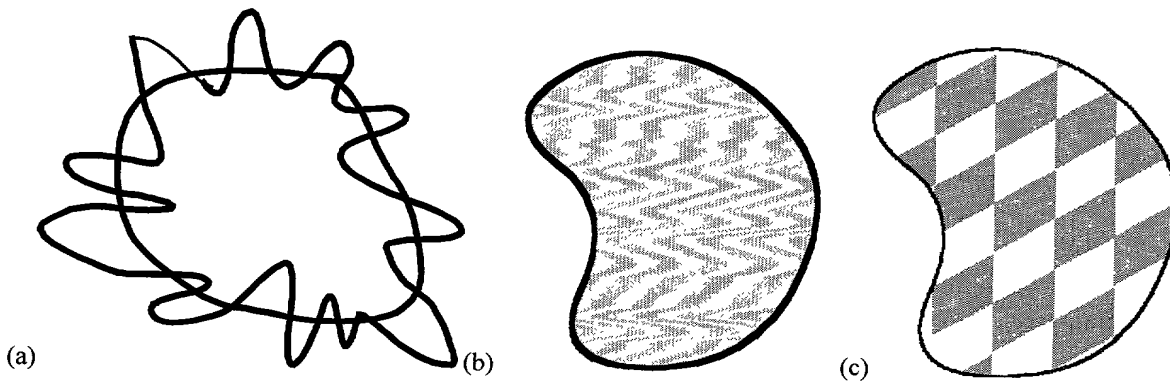


FIG. 35



FIGS. 36a, 36b, and 36c

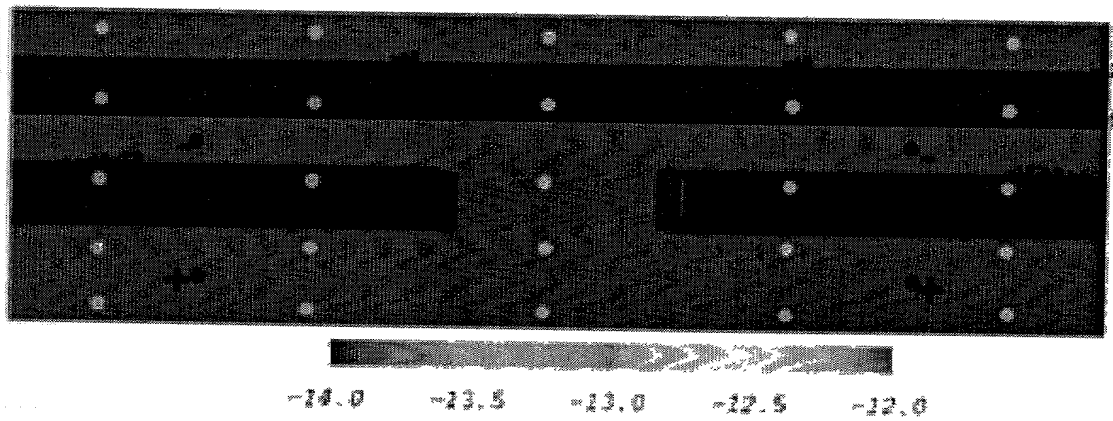


FIG. 37a

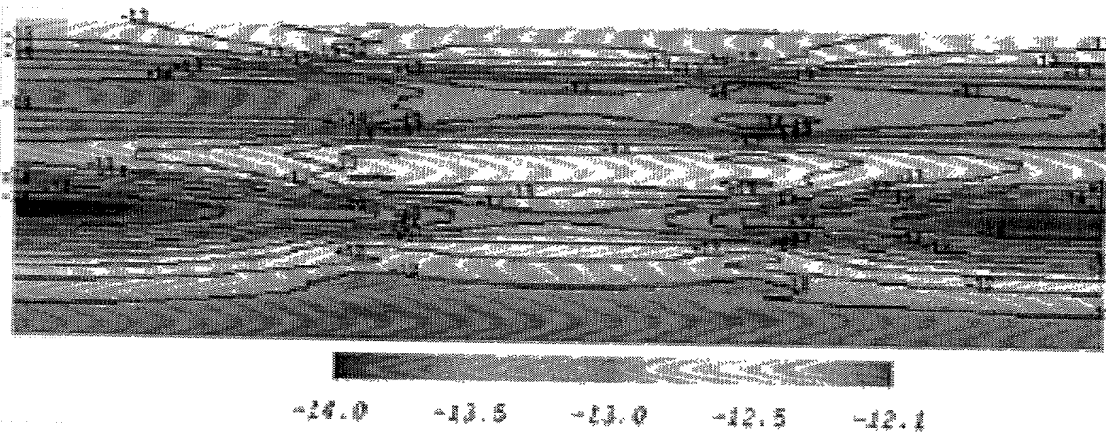
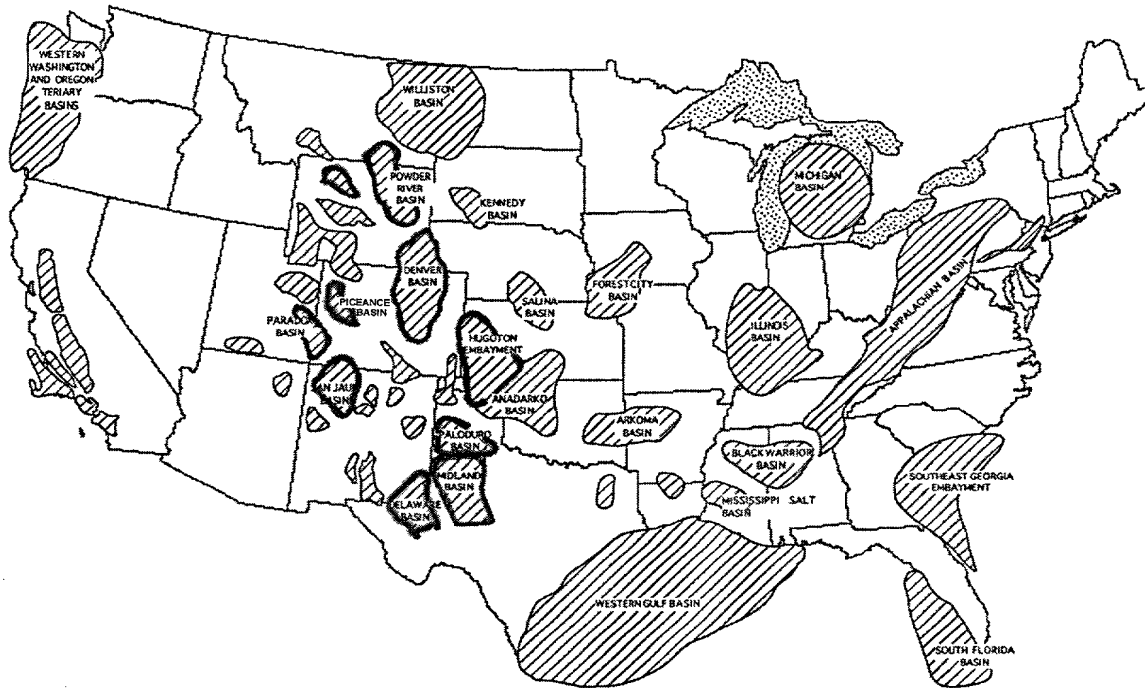
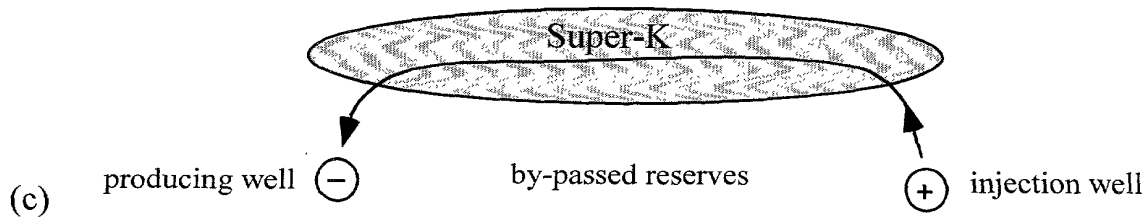
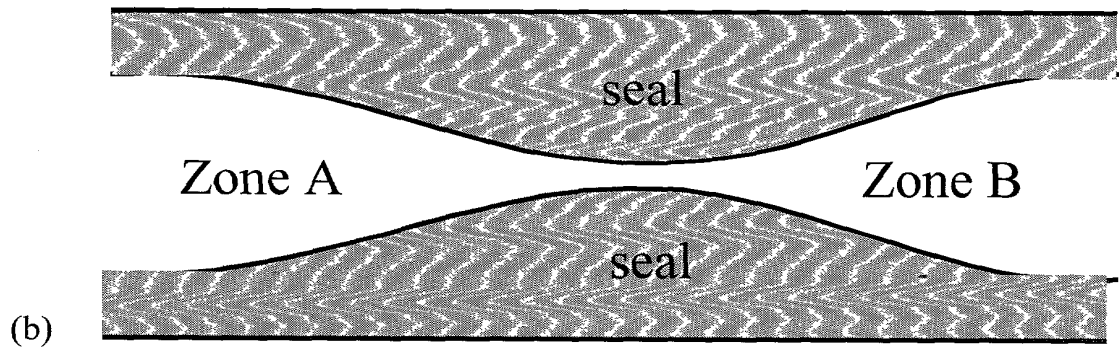
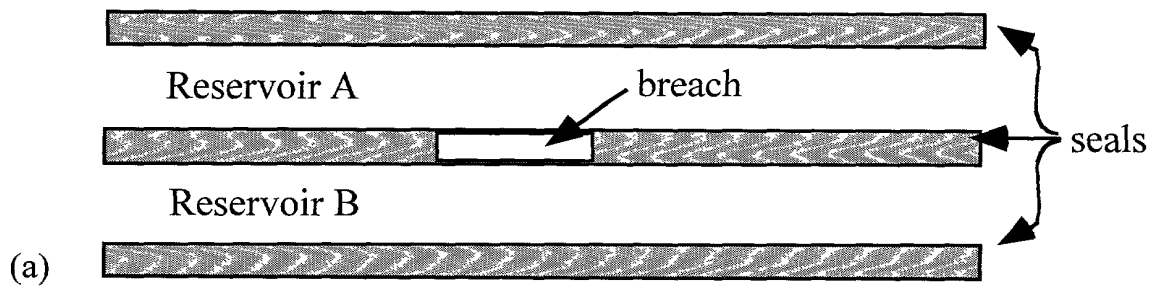


FIG. 37b

**FIG. 38**



FIGS. 39a, 39b, and 39c

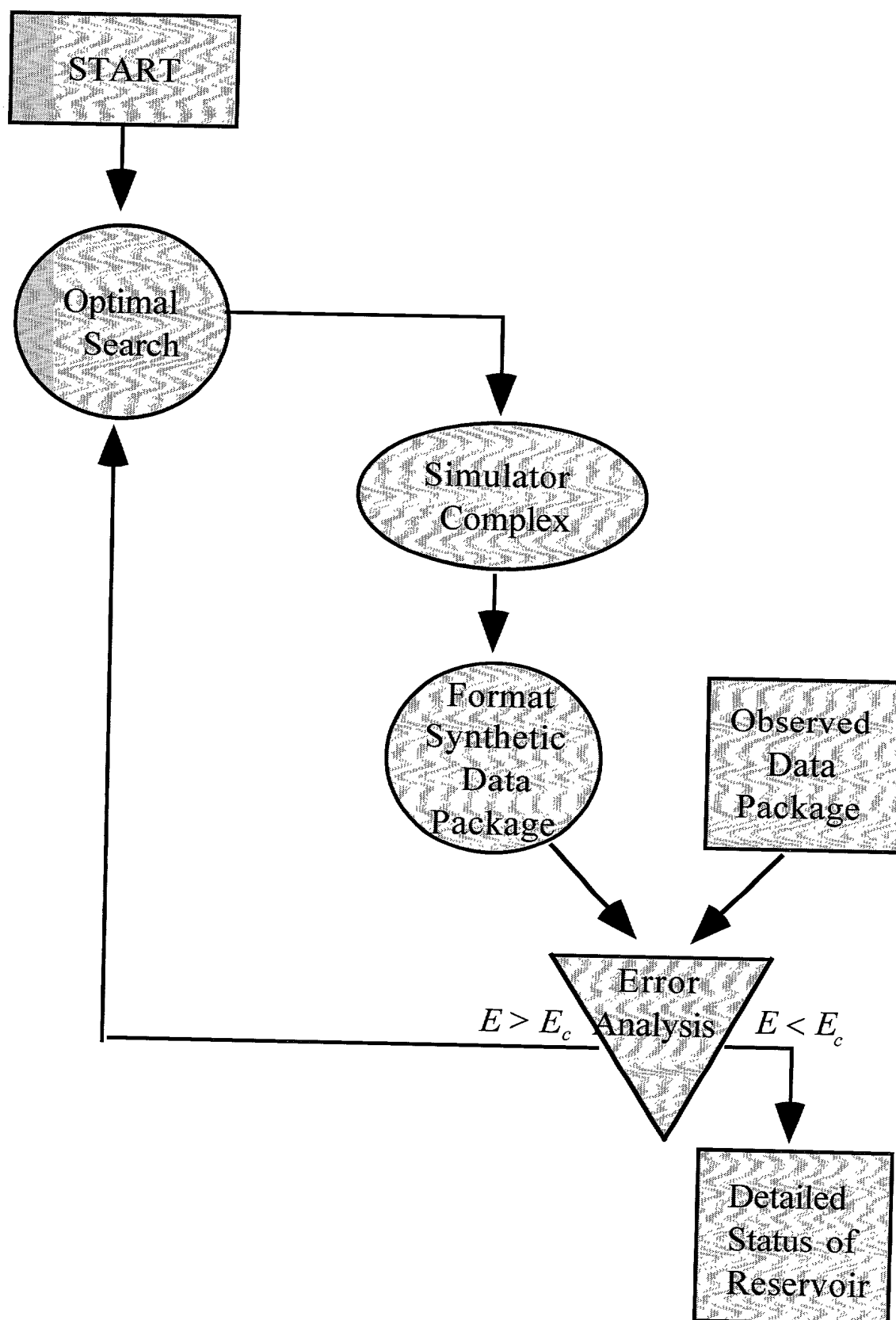
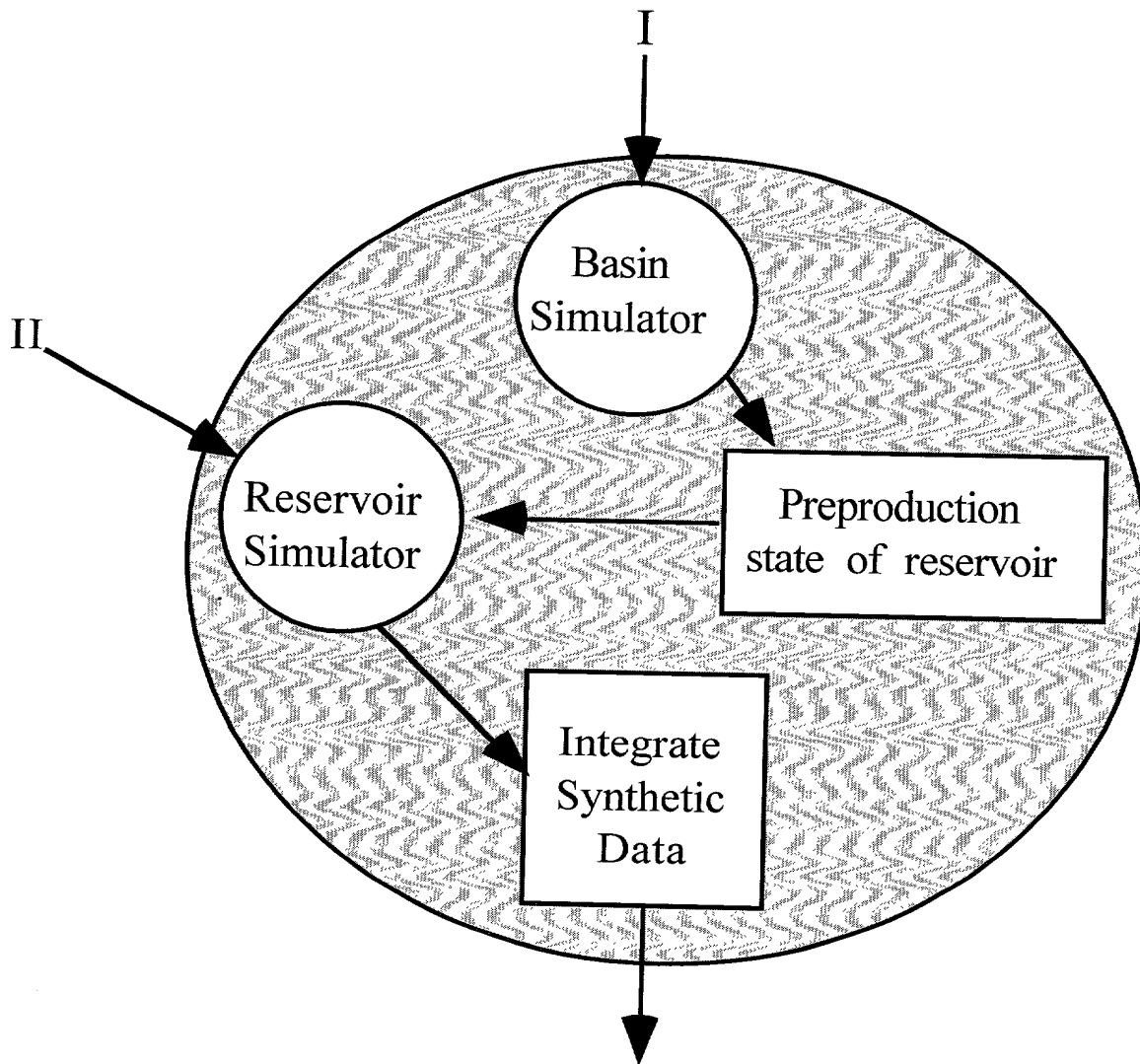
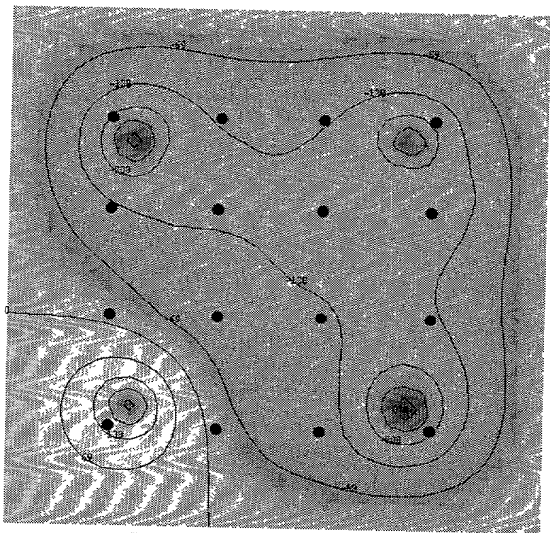
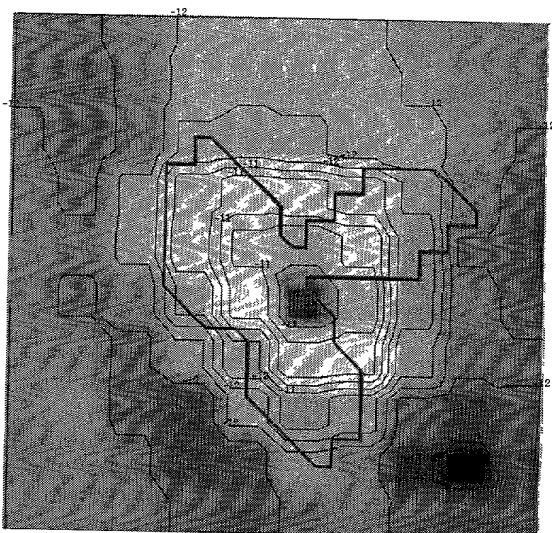


FIG. 40

**FIG. 41**

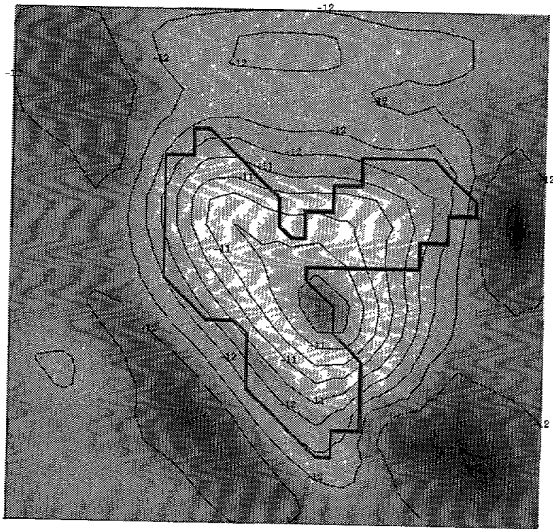


(a)

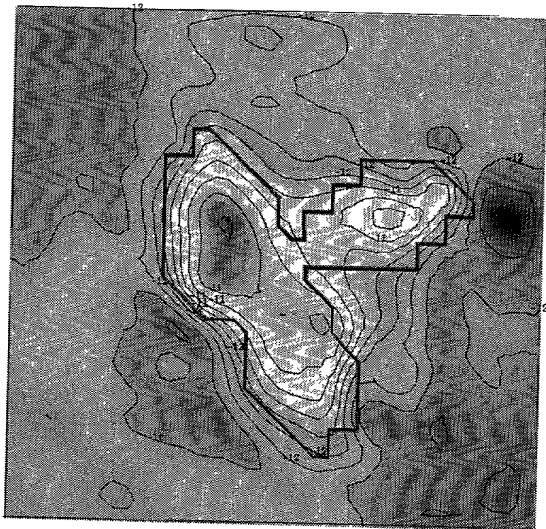


(b)

FIGS. 42a and 42b

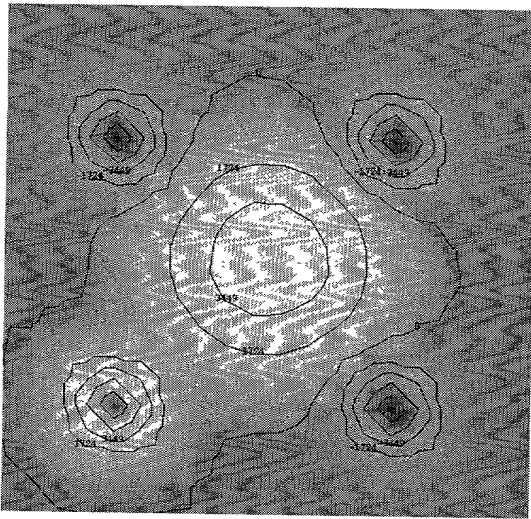


(c)

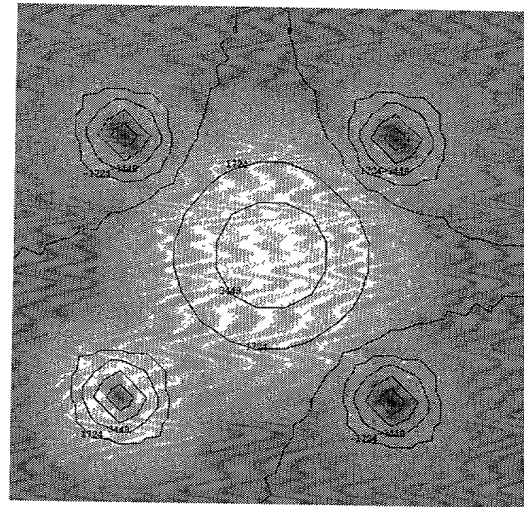


(d)

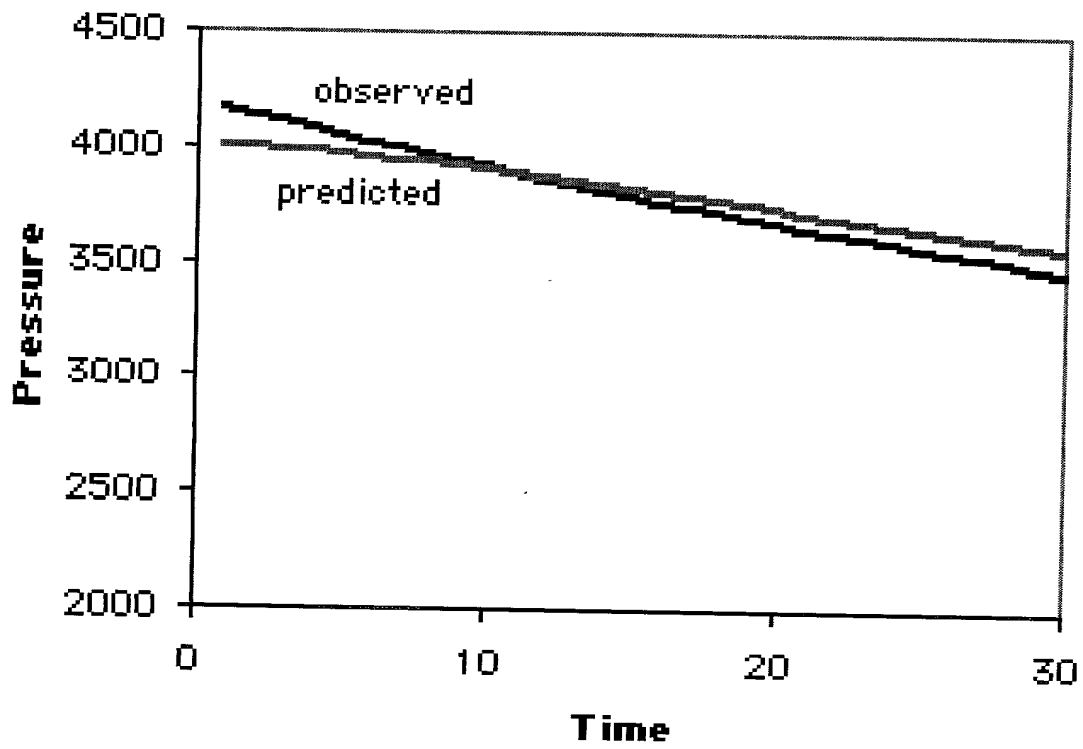
FIGS. 42c and 42d



(a)



(b)



(c)

FIGS. 43a, 43b, and 43c

FIG. 44a

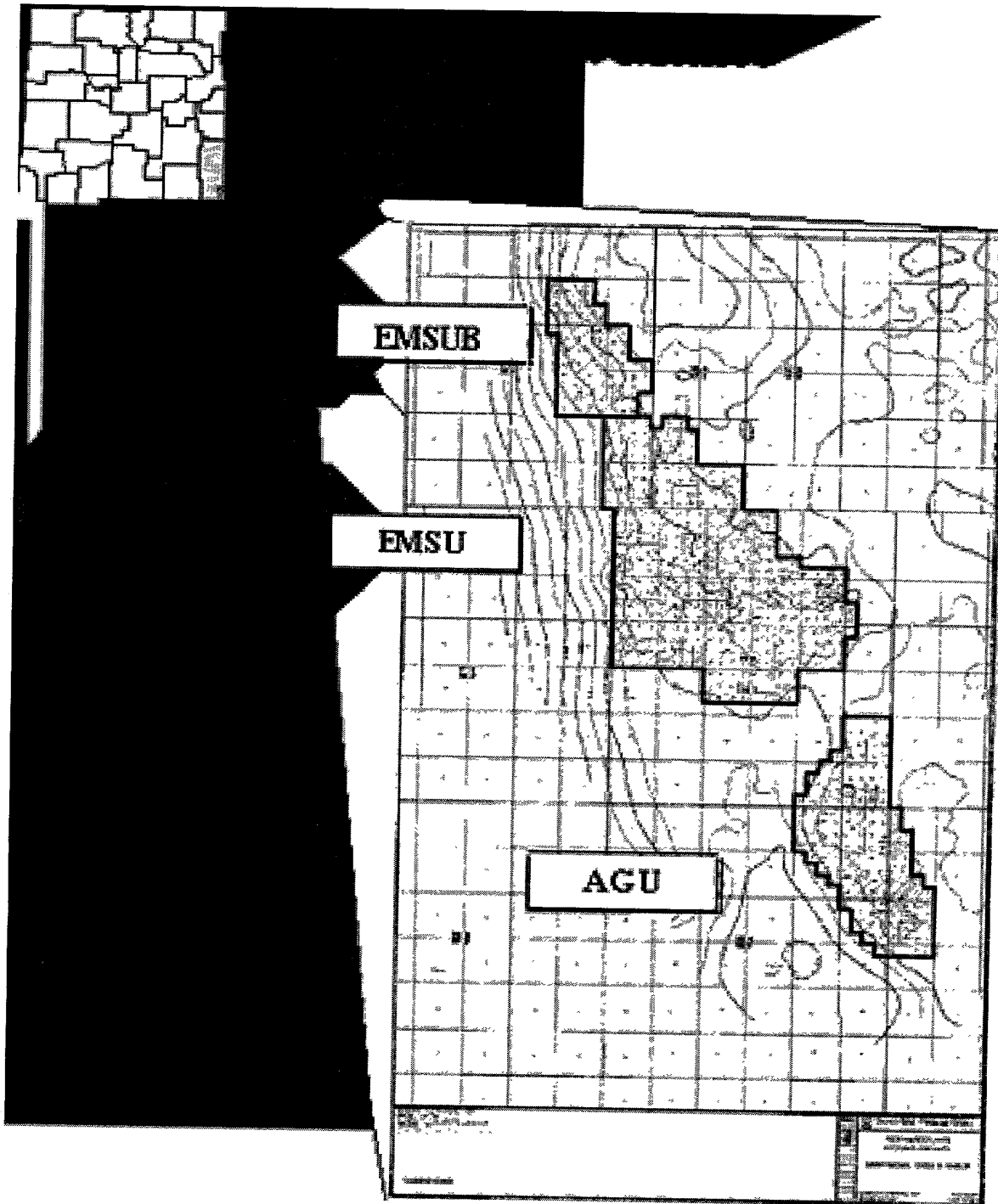
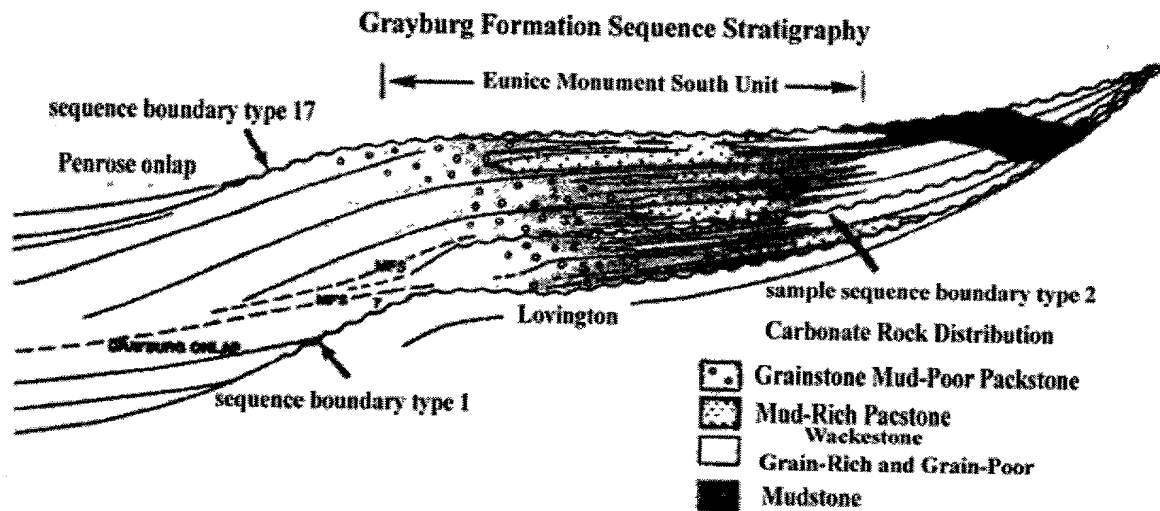
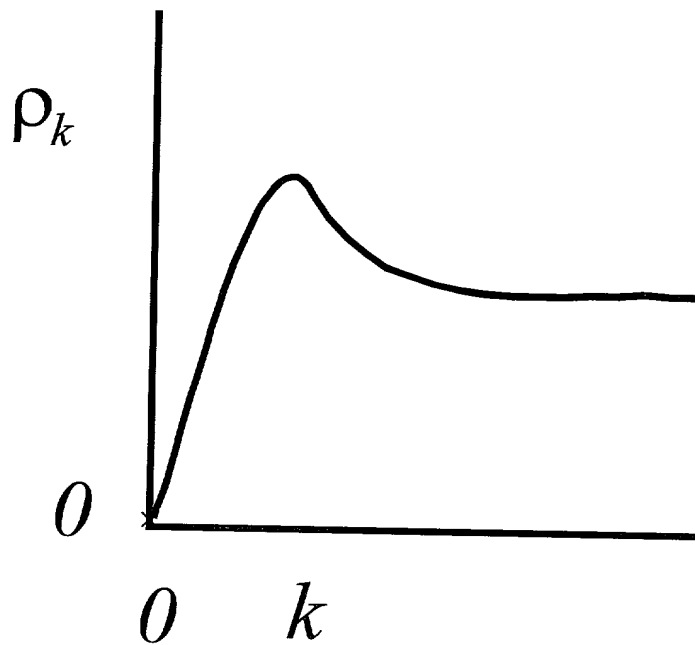
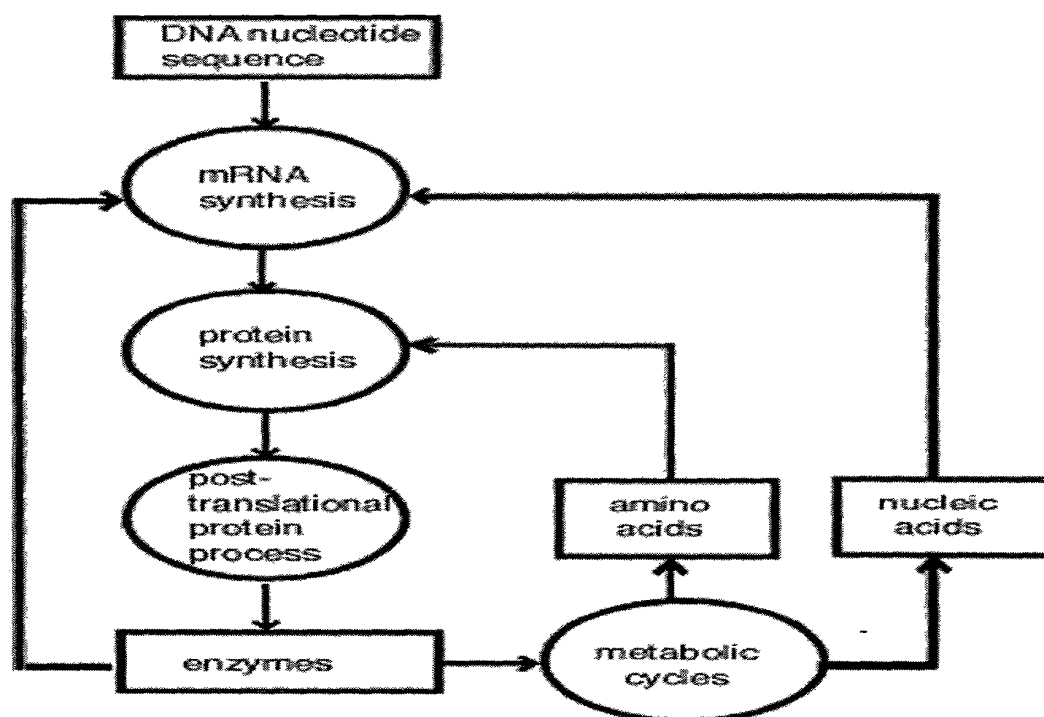
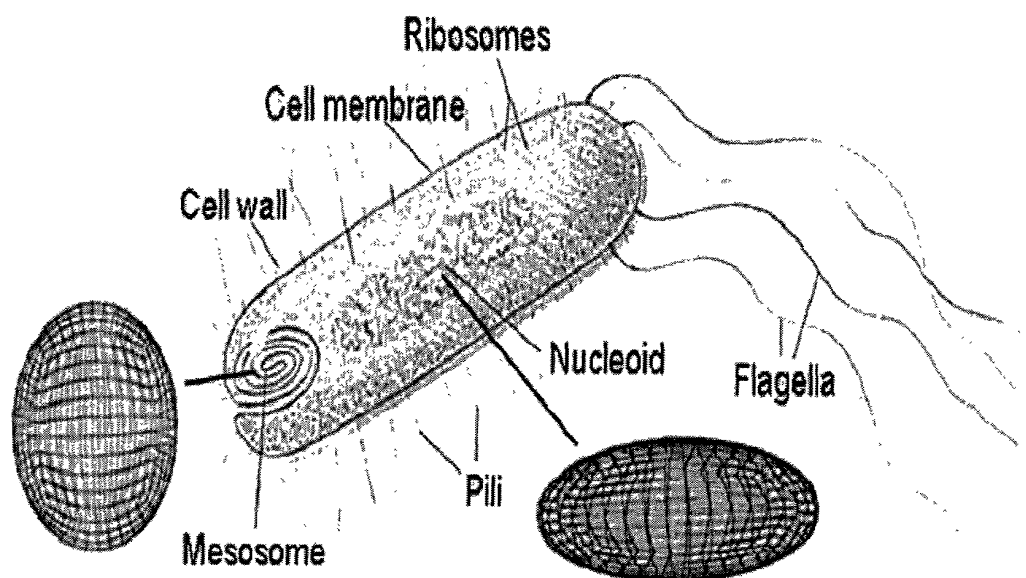


FIG. 44a

**FIG. 44b****FIG. 45**

**FIG. 46****FIG. 47**

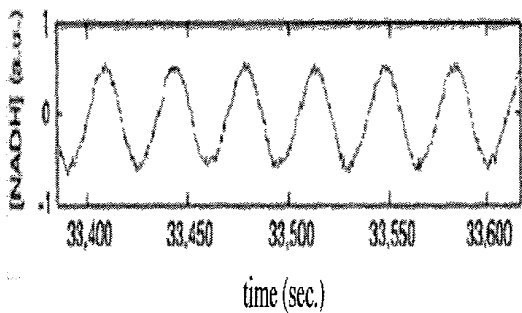


FIG. 48a

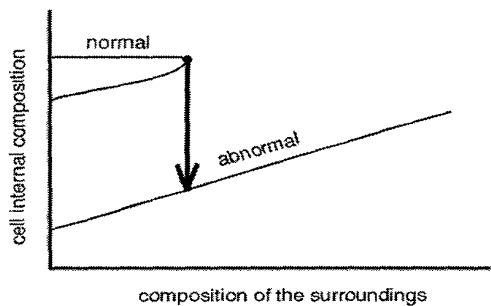


FIG. 48b

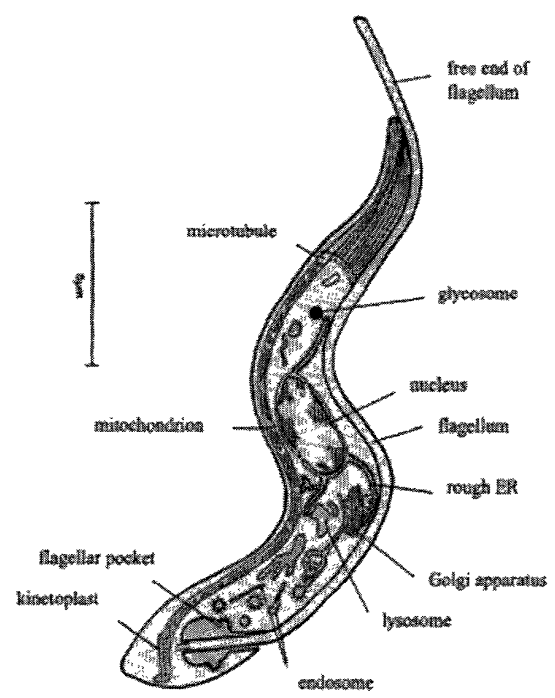


FIG. 49a

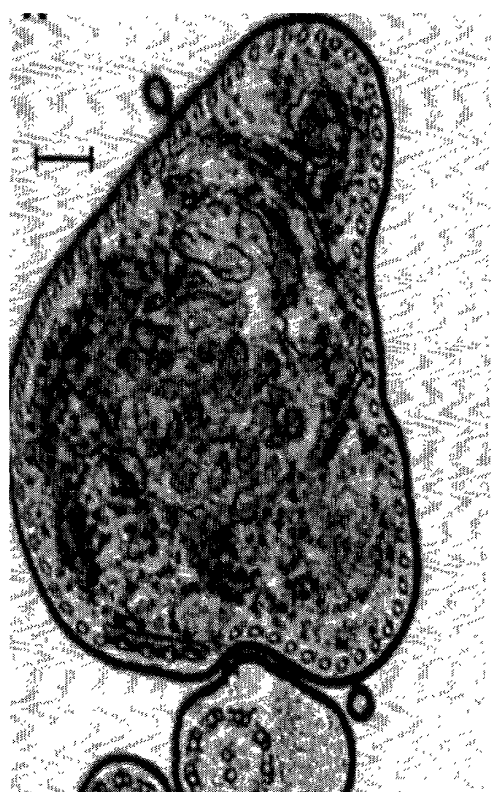
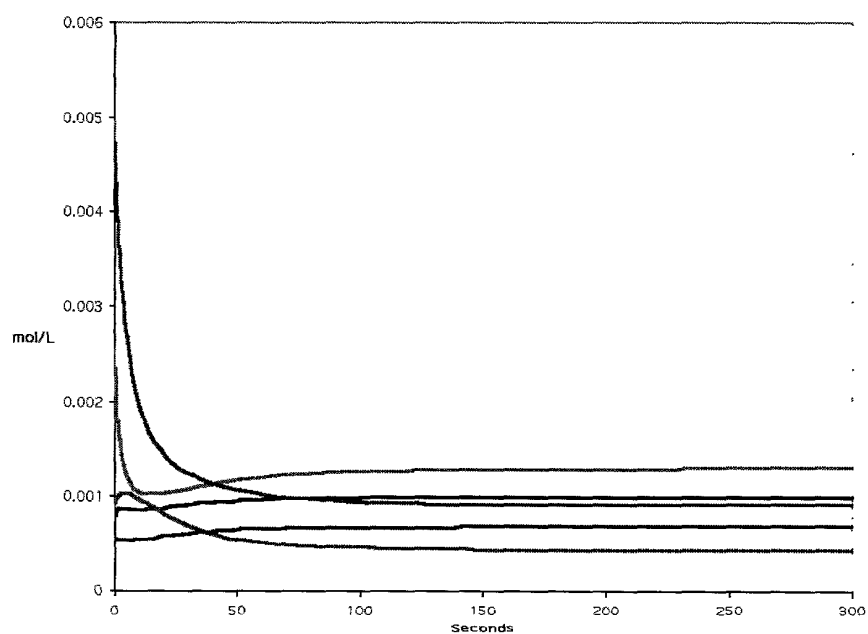


FIG. 49b

**FIG. 49c**

Species Name	Measured Concentration (M)	Cyber-Cell Predicted Concentration (M)
Glucose		1.1×10^{-3}
Glucose-6-phosphate	1.61×10^{-3}	2.2×10^{-3}
Fructose-6-phosphate	8.97×10^{-4}	1.25×10^{-4}
Fructose-1,6-bisphosphate	7.2×10^{-4}	2.12×10^{-4}
Glyceraldehyde-3-phosphate	1.75×10^{-4}	1.2×10^{-3}
Dihydroxyacetone-phosphate	2.65×10^{-4}	18×10^{-3}
1,3-bisphosphoglycerate	2.844×10^{-4}	3×10^{-4}
3-phosphoglycerate	4.79×10^{-3}	1×10^{-3}
[ATP]/[ADP]		0.909

FIG. 50

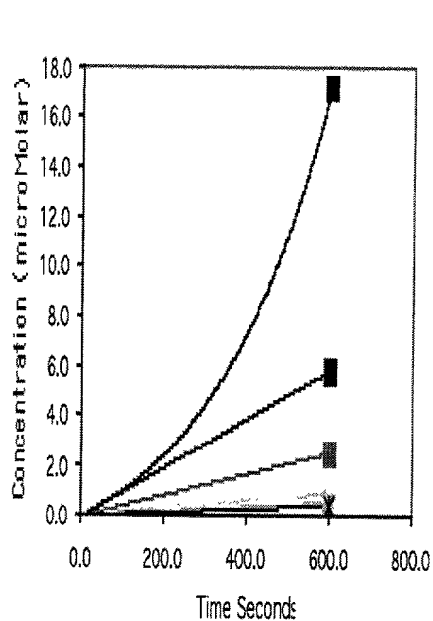


FIG. 51a

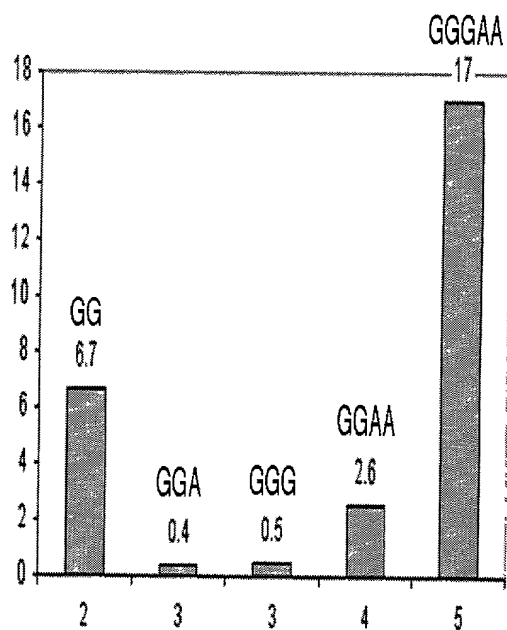


FIG. 51b

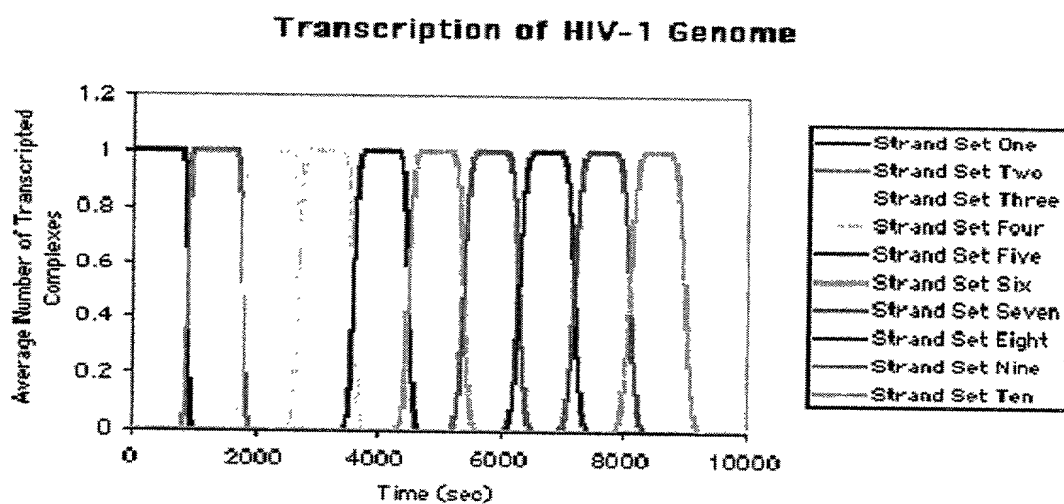


FIG. 52

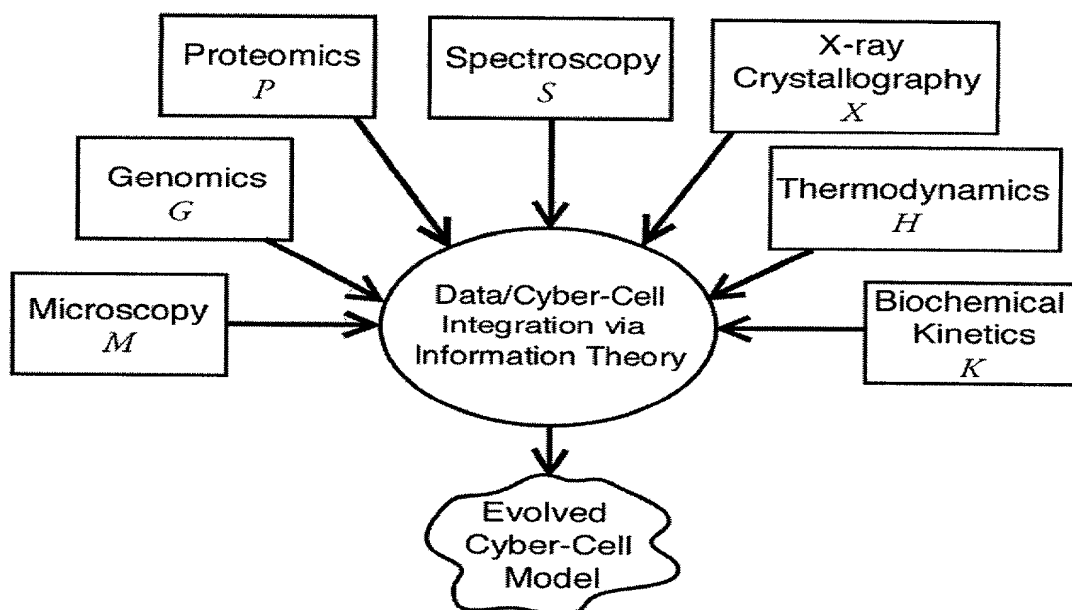


FIG. 53a

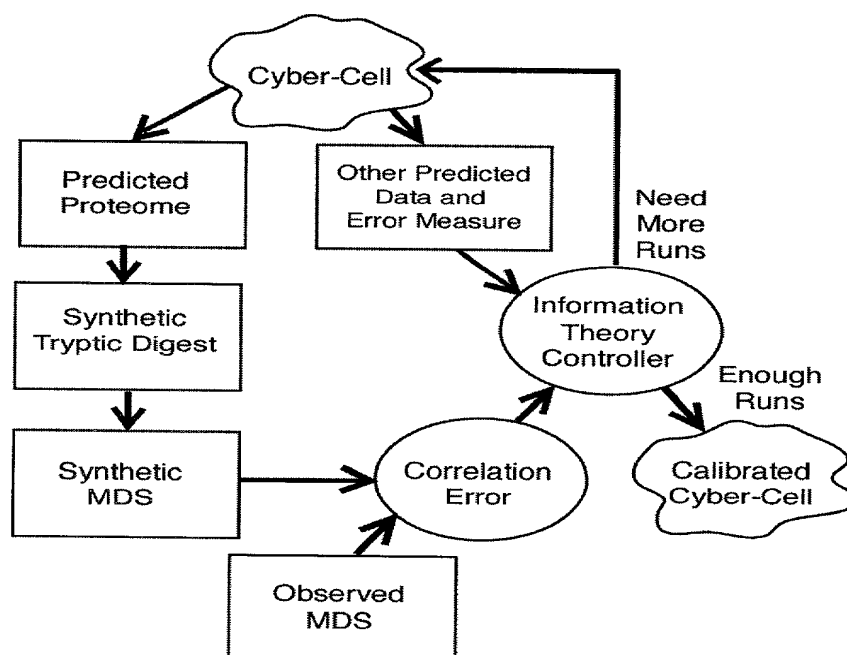


FIG. 53b

37/38

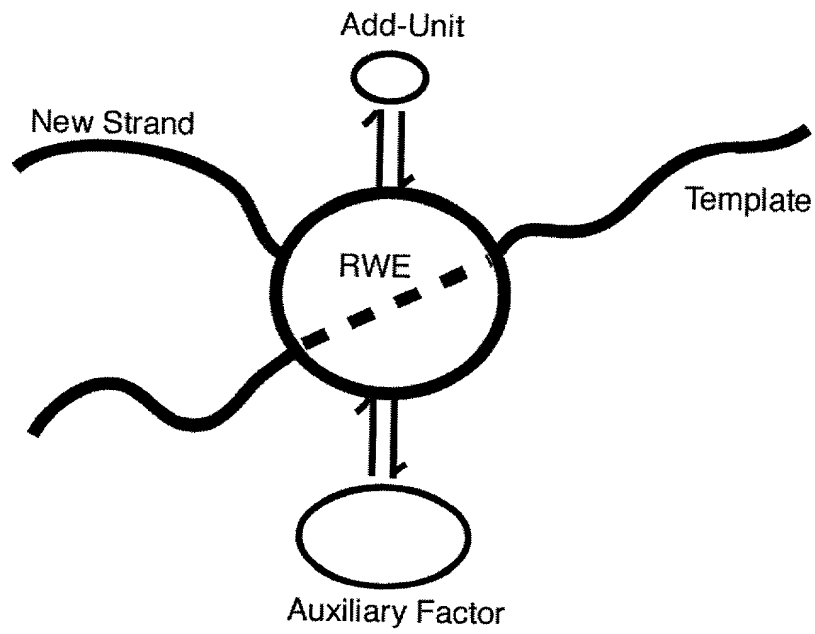


FIG. 54

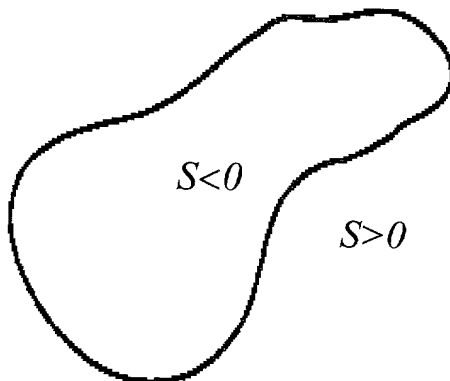


FIG. 55a

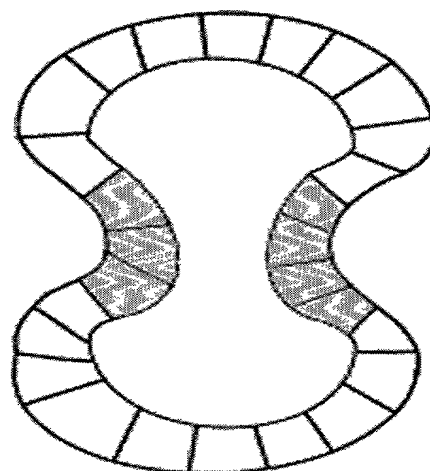
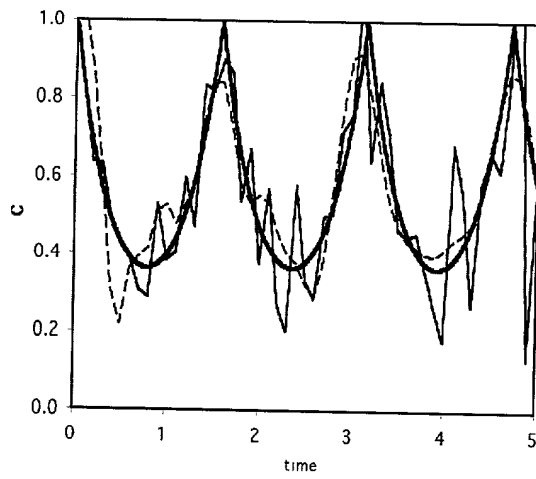
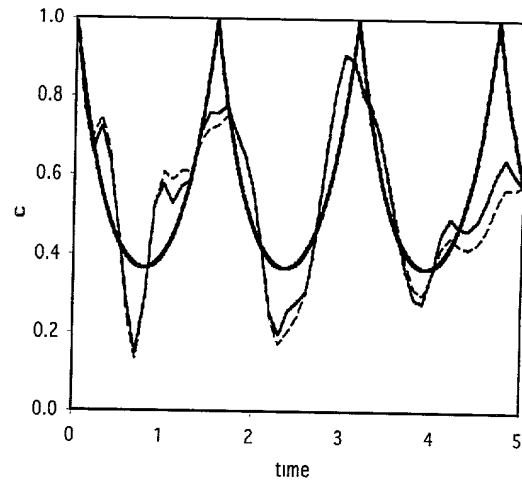
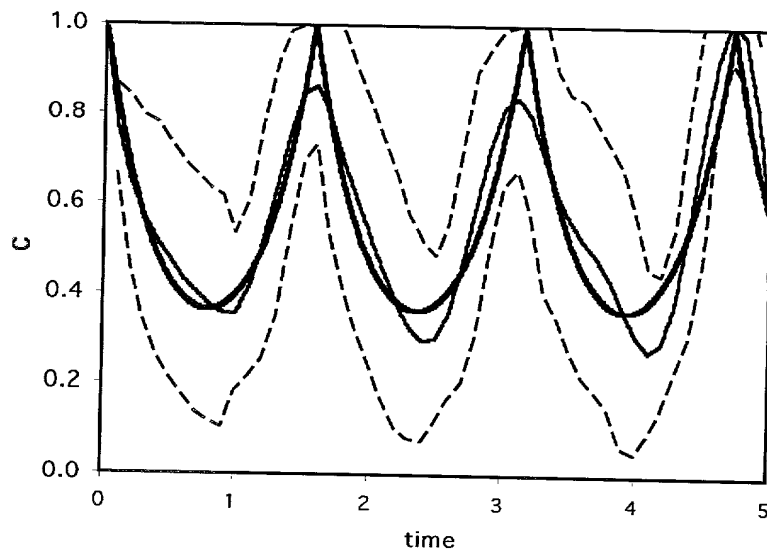


FIG. 55b

**FIG. 56a****FIG. 56b****FIG. 57**